CONSOLIDATED REFERENCE AND DATA INDEX
1953 through 1957

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

A

Acid Cleaning, Inhibitors for ('57) R-238
Activated Carbon ('53) R-123

Activated Silica
Preparation ('56) R-95, R-98, ('57) R-78
Water Plant Operation ('53) R-107, ('57) R-78

Activated Sludge
Design of Plants ('56) R-271
Diffuser Maintenance ('57) R-281
General ('55) R-265
Operating Fundamentals ('54) R-211
Plant Design ('56) R-271
Plant Operation ('53) R-179
Sludge Volume Index Test ('53) R-185

Administrative Practices (See Also: Management)
Accounting and Contact, Customer ('55) R-25
Authorities, Sewage ('57) R-13
General ('57) R-19
Small Water Plants ('56) R-27

Air Conditioning
Equipment, Water Use by ('55) R-224
Growth ('55) R-32
Water Use by Equipment ('55) R-224

Air Diffuser Maintenance ('57) R-281

Air Flow in Pipes ('54) R-273

Algae Control ('56) R-192 ('57, R-197, R-198

Aligning Shafts ('56) R-270

Alkalinity
Equivalents ('55) R-334
Indicators ('56) R-195

Altitude Effect on Pumps ('55) R-337

Altitudes, Barometric Readings at, ('55) R-333

Altitude Valves ('56) R-142

Amperometric Titration ('57) R-213

Analytical Methods
Alkalinity ('56) R-195
Hydrogen Sulfide ('56) R-330
Membrane Filter ('56) R-10, R-109 ('57) R-103
Standard Methods ('57) R-96
Syndets ('56) R-111

Aqueduct Capacity ('56) R-204

Areas of Circles ('56) R-364

Areas, Volumes, Surface Calculations ('55) R-351

Atmospheric Pressures and Barometric Readings ('55) R-333

Authorities for Sewage Works ('57) R-13

Automatic Control of Fluoridation ('57) R-219

Automation ('57) R-54

B

Balls, Rubber Beach, for Cleaning Sewers ('54) R-223

Barometric Pressure Readings ('55) R-333

Base Exchange ('57) R-222

Beam Loading ('55) R-320, R-321

Beams—I ('55) R-321

Beams—Wooden ('55) R-320

Bentonite Clay as Coagulant Aid ('57) R-83

Biochemical Oxygen Demand Calculation ('53) R-185

Block and Tackle Chart ('54) R-91

Blowing Out Service Lines ('53) R-79

Book Publishers ('56) R-19

Books and Reference Manuals ('56) R-17 ('57) R-6

Bulletins and Catalogs ('57) R-371

Butterfly Valves, ('57) R-169

Buying and Using Lime ('55) R-315

C

Calculations of
Biochemical Oxygen Demand ('53) R-185
Pipe Lengths for Inclined Diagonal Runs ('55) R-53

Calgon for Well Rehabilitation ('57) R-117

Capacity, Efficiency, Head, Horsepower Chart ('56) R-362

Capacity, Pipe ('55) R-338

Capacity Tables & Charts
Pipe ('55) R-339
Pipe, Copper and Brass, Pressure Drop ('54) R-270
Pipe Line ('54) R-32
Rectangular Weirs ('55) R-349
Sewer Pipe ('55) R-332
V-Notch Weirs ('55) R-350

Carbon Dioxide, Recarbonation ('55) R-216

Catalogs and Bulletins ('57) R-371

Causes of Water Losses ('55) R-115

Cement-Lining of Mains ('54) R-23, ('55) R-169

Centrifugal Pump
Application ('53) R-23
Basic Factors in Application ('53) R-23
Characteristics ('53) R-32
General ('55) R-48, ('56) R-52, R-56
Inquiry ('53) R-60
Operation and Maintenance ('55) R-48
Rating Curves ('55) R-38
Requirements ('53) R-52
Specific Speed ('53) R-38

Channel
Flow in ('55) R-340
Rectangular, Rate of Flow ('54) R-275

Characteristics of Chlorine ('55) R-210

Charges
Fire Protection ('56) R-35
Industrial Wastes Rates ('55) R-230

Charts
Air Flow in Pipes ('54) R-273
Block and Tackle ('54) R-91
Capacity, Efficiency, Horsepower, Head ('56) R-362
Efficiency, Horsepower, Head, Capacity ('56) R-362
Expansion ('55) R-254
Feed Machines, Dry Chemical ('55) R-89
Flow in Concrete Pipe ('55) R-344
Friction in Valves and Fittings ('56) R-355
Head, Capacity, Efficiency, Horsepower ('56) R-362
Horsepower, Head Capacity, Efficiency ('56) R-362
Land Measure ('56) R-336
Loss of Head ('56) R-352
Lubrication Check Sheet ('55) R-313
Main Sterilization, ('54) R-170-1
Meters, Main Line Selection ('54) R-55, ('56) R-62
Offset, for 45° and 90° Screwed Fittings ('54) R-279
Orifice, Circular ('54) R-169, ('57) R-52
pH Zones ('55) R-336
Piles, Conical Contents ('55) R-242
Pipe Bending ('56) R-244
Pipe Capacity and Velocity ('55) R-338
Pipe, Copper and Brass, Capacity and Pressure Drop ('54) R-271
Pipe Flow ('54) R-78
Pumping Costs ('57) R-240
Pumping Warm Water ('56) R-58
Rate of Flow in Circular Sewer ('54) R-274
Rate of Flow in Rectangular Channel ('54) R-275
Sludge Density to Volume Ratio ('53) R-206
Sludge Digestion, Per Cent ('55) R-290
Water Cooling, Underground ('54) R-71
Weir Capacity, Rectangular ('55) R-349
Weir Capacity, V-Notch ('55) R-350

Chemical
Cleaning of Wells ('56) R-121
Feeder Puzzlers ('55) R-91
Feed Table ('54) R-108
Handling ('55) R-81, ('56) R-83, ('57) R-71
Lime ('57) R-72
Solution Handling ('54) R-173

Chemical Cleaning of Wells ('56) R-121

Chemical Feeders, Selecting ('56) R-84

Chemical Feeding
Checking Chart for Dry ('55) R-89
Chlorine ('55) R-83, ('57) R-206
Feeders, Selecting ('56) R-84
General ('57) R-71
Lime ('57) R-72
Outline of (55) R-81 ('56) R-83
Puzzlers ('55) R-91

Chemical Handling ('55) R-81 ('56) R-83

Chlorination (See Also: Chlorine)
Aqueduct ('56) R-204
Control ('57) R-213
Control Nomogram ('55) R-278
Dosage Control ('54) R-164
Leak Testing ('57) R-239
Pipe Line ('55) R-209, ('56) R-116
Sewage ('53) R-197, ('55) R-277, ('56) R-283, ('57) R-291
Wastes, Sewage & Industrial ('53) R-197
Water, Notes on ('55) R-208
Wells ('57) R-115

Chlorine (See Also: Chlorination)
Characteristics ('55) R-210
Container Truck ('56) R-196
Feeders ('57) R-205
Gas Masks ('54) R-157, ('56) R-43
Handling ('54) R-146, ('55) R-39, ('56) R-43
Leak Testing ('57) R-239
Package ('56) R-197

CONSOLIDATED REFERENCE AND DATA INDEX
1953 through 1957

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

A

Acid Cleaning, Inhibitors for ('57) R-238
Activated Carbon ('53) R-123

Activated Silica
Preparation ('56) R-95, R-98, ('57) R-78
Water Plant Operation ('53) R-107, ('57) R-78

Activated Sludge
Design of Plants ('56) R-271
Diffuser Maintenance ('57) R-281
General ('55) R-265
Operating Fundamentals ('54) R-211
Plant Design ('56) R-271
Plant Operation ('53) R-179
Sludge Volume Index Test ('53) R-185

Administrative Practices (See Also: Management)
Accounting and Contact, Customer ('55) R-25
Authorities, Sewage ('57) R-13
General ('57) R-19
Small Water Plants ('56) R-27

Air Conditioning
Equipment, Water Use by ('55) R-224
Growth ('55) R-32
Water Use by Equipment ('55) R-224

Air Diffuser Maintenance ('57) R-281

Air Flow in Pipes ('54) R-273

Algae Control ('56) R-192 ('57, R-197, R-198

Aligning Shafts ('56) R-270

Alkalinity
Equivalents ('55) R-334
Indicators ('56) R-195

Altitude Effect on Pumps ('55) R-337

Altitudes, Barometric Readings at, ('55) R-333

Altitude Valves ('56) R-142

Amperometric Titration ('57) R-213

Analytical Methods
Alkalinity ('56) R-195
Hydrogen Sulfide ('56) R-330
Membrane Filter ('56) R-10, R-109 ('57) R-103
Standard Methods ('57) R-96
Syndets ('56) R-111

Aqueduct Capacity ('56) R-204

Areas of Circles ('56) R-364

Areas, Volumes, Surface Calculations ('55) R-351

Atmospheric Pressures and Barometric Readings ('55) R-333

Authorities for Sewage Works ('57) R-13

Automatic Control of Fluoridation ('57) R-219

Automation ('57) R-54

B

Balls, Rubber Beach, for Cleaning Sewers ('54) R-223

Barometric Pressure Readings ('55) R-333

Base Exchange ('57) R-222

Beam Loading ('55) R-320, R-321

Beams—I ('55) R-321

Beams—Wooden ('55) R-320

Bentonite Clay as Coagulant Aid ('57) R-83

Biochemical Oxygen Demand Calculation ('53) R-185

Block and Tackle Chart ('54) R-91

Blowing Out Service Lines ('53) R-79

Book Publishers ('56) R-19

Books and Reference Manuals ('56) R-17 ('57) R-6

Bulletins and Catalogs ('57) R-371

Butterfly Valves, ('57) R-169

Buying and Using Lime ('55) R-315

C

Calculations of
Biochemical Oxygen Demand ('53) R-185
Pipe Lengths for Inclined Diagonal Runs ('55) R-53

Calgon for Well Rehabilitation ('57) R-117

Capacity, Efficiency, Head, Horsepower Chart ('56) R-362

Capacity, Pipe ('55) R-338

Capacity Tables & Charts
Pipe ('55) R-339
Pipe, Copper and Brass, Pressure Drop ('54) R-270
Pipe Line ('54) R-32
Rectangular Weirs ('55) R-349
Sewer Pipe ('55) R-332
V-Notch Weirs ('55) R-350

Carbon Dioxide, Recarbonation ('55) R-216

Catalogs and Bulletins ('57) R-371

Causes of Water Losses ('55) R-115

Cement-Lining of Mains ('54) R-23, ('55) R-169

Centrifugal Pump
Application ('53) R-23
Basic Factors in Application ('53) R-23
Characteristics ('53) R-32
General ('55) R-48, ('56) R-52, R-56
Inquiry ('53) R-60
Operation and Maintenance ('55) R-48
Rating Curves ('55) R-38
Requirements ('53) R-52
Specific Speed ('53) R-38

Channel
Flow in ('55) R-340
Rectangular, Rate of Flow ('54) R-275

Characteristics of Chlorine ('55) R-210

Charges
Fire Protection ('56) R-35
Industrial Wastes Rates ('55) R-230

Charts
Air Flow in Pipes ('54) R-273
Block and Tackle ('54) R-91
Capacity, Efficiency, Horsepower, Head ('56) R-362
Efficiency, Horsepower, Head, Capacity ('56) R-362
Expansion ('55) R-254
Feed Machines, Dry Chemical ('55) R-89
Flow in Concrete Pipe ('55) R-344
Friction in Valves and Fittings ('56) R-355
Head, Capacity, Efficiency, Horsepower ('56) R-362
Horsepower, Head Capacity, Efficiency ('56) R-362
Land Measure ('56) R-336
Loss of Head ('56) R-352
Lubrication Check Sheet ('55) R-313
Main Sterilization, ('54) R-170-1
Meters, Main Line Selection ('54) R-55, ('56) R-62
Offset, for 45° and 90° Screwed Fittings ('54) R-279
Orifice, Circular ('54) R-169, ('57) R-52
pH Zones ('55) R-336
Piles, Conical Contents ('55) R-242
Pipe Bending ('56) R-244
Pipe Capacity and Velocity ('55) R-338
Pipe, Copper and Brass, Capacity and Pressure Drop ('54) R-271
Pipe Flow ('54) R-78
Pumping Costs ('57) R-240
Pumping Warm Water ('56) R-58
Rate of Flow in Circular Sewer ('54) R-274
Rate of Flow in Rectangular Channel ('54) R-275
Sludge Density to Volume Ratio ('53) R-206
Sludge Digestion, Per Cent ('55) R-290
Water Cooling, Underground ('54) R-71
Weir Capacity, Rectangular ('55) R-349
Weir Capacity, V-Notch ('55) R-350

Chemical
Cleaning of Wells ('56) R-121
Feeder Puzzlers ('55) R-91
Feed Table ('54) R-108
Handling ('55) R-81, ('56) R-83, ('57) R-71
Lime ('57) R-72
Solution Handling ('54) R-173

Chemical Cleaning of Wells ('56) R-121

Chemical Feeders, Selecting ('56) R-84

Chemical Feeding
Checking Chart for Dry ('55) R-89
Chlorine ('55) R-83, ('57) R-206
Feeders, Selecting ('56) R-84
General ('57) R-71
Lime ('57) R-72
Outline of (55) R-81 ('56) R-83
Puzzlers ('55) R-91

Chemical Handling ('55) R-81 ('56) R-83

Chlorination (See Also: Chlorine)
Aqueduct ('56) R-204
Control ('57) R-213
Control Nomogram ('55) R-278
Dosage Control ('54) R-164
Leak Testing ('57) R-239
Pipe Line ('55) R-209, ('56) R-116
Sewage ('53) R-197, ('55) R-277, ('56) R-283, ('57) R-291
Wastes, Sewage & Industrial ('53) R-197
Water, Notes on ('55) R-208
Wells ('57) R-115

Chlorine (See Also: Chlorination)
Characteristics ('55) R-210
Container Truck ('56) R-196
Feeders ('57) R-205
Gas Masks ('54) R-157, ('56) R-43
Handling ('54) R-146, ('55) R-39, ('56) R-43
Leak Testing ('57) R-239
Package ('56) R-197

REFERENCE AND DATA INDEX 1953 through 1957

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

Procedures for Use ('55) R-83
Residual Recording ('57) R-213
Restoration of Aqueduct Capacity ('56) R-204
Safety ('54) R-146, ('55) R-39, ('56) R-43

Circles, Area of ('56) R-364

Circular Channels, Flow in ('55) R-340

Clarifiers (See Also: Sedimentation Units)
Maintenance ('54) R-207

Classified Products Index ('56) R-3

Cleaning
Distribution Systems ('54) R-23, ('55) R-169, ('57) R-136
Meters ('57) R-183
Sewers with Rubber Beach Balls ('54 R-223
Water Mains ('54) R-23, ('55) R-169, ('57) R-136
Wells ('56) R-121

Coagulation
Activated Silica ('53) R-107, ('56) R-95, R-98, ('57) R-78
Aid ('53) R-107, ('56) R-95, R-98, ('57) R-78, R-83
Bentonite Clay ('57) R-83
Chemistry ('55) R-99, ('56) R-91, ('57) R-77
Control Tests ('55) R-97
Notes on ('55) R-95, R-99, ('56) R-91, ('57) R-77
Jar Tests ('55) R-97
Water ('55) R-99, ('56) R-91, ('57) R-77

Color Coding in Plants ('54) R-135, ('57) R-110

Commercial Records ('56) R-29

Comminutors ('54) R-247

Compressed Air
Application ('57) R-231
Dewatering of Mains ('53) R-66
Flushing of Small Mains ('55) R-196
Water Works ('56) R-215

Concrete Proportioning ('53) R-126, ('54) R-135

Conduits, Flow in ('55) R-340

Conical Pile Contents ('55) R-242

Connections in Sewers ('55) R-332

Construction
Design, and ('56) R-331
Equipment ('57) R-331
Sewer Connections ('55) R-332
Transit Crane ('57) R-356
Trucking Practice ('56) R-333

Control
Algae ('57) R-198
Chlorination Nomogram ('55) R-278
Chlorine Residual ('57) R-213
Coagulation, Tests ('55) R-97
Copper Sulfate Dosage ('57) R-198
Corrosion ('54) R-141, ('55) R-105, ('56) R-99, ('57) R-87
Fluoridation ('56) R-219
Hydrogen Sulfide in Sewers ('57) R-249
Industrial Waste Instrumentation ('55) R-73
Instrumentation ('56) R-73, R-74, ('57) R-54, R-66
Laboratory ('55) R-113
Pipe Growths, by Chlorination ('55) R-209, ('57) R-116
Remote ('56) R-78
Taste and Odor ('53) R-123, ('56) R-192, ('57) R-197, R-198
Watershed ('56) R-117

Controlled Humus Production ('57) R-296

Conversion Tables & Data, Factors
Areas and Volumes ('56) R-140
Current Flow and Heat Production ('56) R-154
Engineering Data ('55) R-337
General ('55) R-337
GPG to Oz per min. ('54) R-108
Head—Pressure ('54) R-175
Heat and Power ('54) R-276
Horsepower to Head ('53) R-95
Metric ('53) R-64
Miscellaneous ('56) R-140
Ounces of Water to Mercury Inches ('54) R-276
Oz per min to GPG ('54) R-108
Power and Heat ('54) R-276
Pressure to Head ('54) R-175
Weights and Measures ('55) R-358

Cooling Scheme with Underground Water ('54) R-71

Copper and Health ('55) R-118

Copper Sulfate Dosage Determination ('57) R-198

Corrosion
Control ('54) R-141, ('55) R-105, ('56) R-99, ('57) R-87, R-90, R-91
Control with Lime ('57) R-91
Fundamentals and Mitigation ('53) R-102, ('56) R-99, ('57) R-87
Mechanism ('53) R-102, ('56) R-99, ('57) R-87
Sewage Works ('57) R-90
Water Works Materials ('57) R-87

Cost
Leaks ('53) R-88
Pumping ('57) R-240
Pump Replacement ('57) R-33
Water ('57) R-15
Water Works ('57) R-15

Counteraction, Sewage Odor ('57) R-337

Customer Accounting and Contact ('55) R-25

Cutting Large Diameter Pipe ('57) R-332

Cylindrical Tank, Contents of ('55) R-335, R-336, ('56) R-363

D

Data
Collection ('57) R-365
Current Flow and Heat Production ('56) R-154
How to Use ('57) R-365
Storage ('57) R-365
Velocity in Pipes ('55) R-338, R-345
Weights & Measures ('55) R-358

Decimal Equivalents ('55) R-104

Degrees of Hardness ('54) R-86

Demineralization ('57) R-222

Design
Activated Sludge Plants ('56) R-271
Construction, and ('56) R-331
Main Extensions ('56) R-136
Meter Maintenance Shop Layout ('55) R-192
Pump Stations, Sewage ('55) R-323
Pumping Plant, Sewage ('56) R-34
Pumping Station, Sewage ('57) R-347
Services, Water ('54) R-69
Sewage Pump Stations ('55) R-323
Sewers, Minor Sanitary ('56) R-337
Water Works, Small ('56) R-183

Detergents (See Syndets)

Determination of
Alkalinity ('56) R-195
Copper Sulfate Dosage ('57) R-198
Filterability ('55) R-115
Hydrogen Sulfide ('56) R-330
Most Probable Number of Coliforms ('56) R-108, R-109, ('57) R-103
Per Cent Sludge Digestion ('55) R-290
Pumping Costs ('57) R-240
Pumping System Needs ('53) R-43
Sulfides ('54) R-208
Syndets ('56) R-111

Dewatering, Drying and Incineration ('55) R-291

Dewatering Mains with Compressed Air ('53) R-66

Diagonal Runs, Pipe ('55) R-53

Diatomaceous Earth Filtration ('56) R-189, ('57) R-193

Differential Producers ('56) R-66

Digestion
Liming a Digester ('55) R-289
Sludge—See: Sludge Digestion
Sludge, Per Cent ('55) R-290

Diffusers, Air ('57) R-281

Directories
Manufacturers ('57) R-358
Products ('56) R-3, ('57) R-383
State and Interstate Agencies ('57) R-4
State Sanitary Engineers ('57) R-5

Discharge Measurement of Hydrants ('54) R-83

Discharge Tables
Hydrant Measurement ('54) R-83
Orifice ('54) R-169, ('57) R-52
Parshall Measuring Flumes ('54) R-276

Disinfection
Mains ('54) R-170
Sewage ('53) R-197, ('55) R-277, ('56) R-283, ('57) R-291
Tanks by Spraying ('55) R-77

Disposal of
Solids ('55) R-291
Sludge ('55) R-281, ('56) R-292
Waste Water ('54) R-219

Distribution System
Adequate ('56) R-125
Cleaning and Cement Lining ('54) R-23, ('55) R-169, ('57) R-133
Components ('56) R-125
Elevated Tanks ('55) R-146, ('56) R-157, R-161, R-166, R-172
Extension Financing ('54) R-77
Features ('56) R-125
Financing Extensions ('54) R-77
General Notes ('57) R-121
Meter Maintenance ('57) R-176, R-179, R-183
Meter Reading ('57) R-175
Pipe Thawing ('57) R-135
Pitometer Surveys ('55) R-159
Pressure Regulators ('56) R-142
Service Line Cleaning ('53) R-79
Storage ('55) R-146
Storage, Peak Demand ('57) R-122
Storage Tanks, Pneumatic ('53) R-60
Tanks, Steel, Reservoirs ('54) R-33

D.M. Test for Cu SO$_4$ Dosage ('57) R-198

Dosage Control
Chlorine ('54) R-154, ('57) R-291
Copper Sulfate ('57) R-198
Dry Feed Table ('54) R-104

Dry Feed Dosage Table ('54) R-198

Dry Feeders ('56) R-64

REFERENCE AND DATA INDEX 1953 through 1957

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

Dryers, Flash ('57) R-325
Dryers, Sludge ('57) R-313
Dual-Fuel Engines ('57) R-309
Dwindling Clean Water Supply ('54) R-177, ('55) R-133, 131, ('56) R-114

E

Efficiency, Horsepower, Head, Capacity Chart ('56) R-362
Electrical Equipment ('56) R-59
Electricity
- Data on ('56) R-58
- Equipment ('56) R-59
- Motor Starting Problems ('57) R-38
- Plant ('55) R-57

Electronic Equipment for Locating Pipes and Leaks ('53) R-87
Elevated Storage Tank Repainting ('53) R-79
Elevated Storage Tanks Steel ('55) R-146, ('56) R-157, R-161, R-166, R-172, ('57) R-129
Elutriation of Sludge ('55) R-291, ('56) R-305
Engineering Fundamentals ('55) R-333, ('56) R-350
Engines, Dual-Fuel ('57) R-309
Equation of Pipes ('56) R-358
Equipment
- Electrical, Operations ('56) R-59
- Electronic for Locating Pipes and Leaks ('53) R-87
- Maintenance ('54) R-204, R-208
- Sewage ('54) R-234
- Sewage Treatment Plant ('56) R-247
- Sewage Works ('53) R-208
- Ventilating, Maintenance ('54) R-206

Equitable Charges for Fire Protection ('56) R-35
Equivalents
- Current Flow and Heat Production ('56) R-154
- Decimal ('55) R-104
- Heat and Power ('54) R-276
- Ounces in Water and Mercury ('54) R-276
- Pipe Size Nomograph ('57) R-362
- Power and Heat ('54) R-276

Expansion Chart ('55) R-254
E-Zee Bee-O-Dee ('53) R-185

F

Feeding Devices
- Chemical, Dry, Checking Chart ('55) R-89
- Chemical, Puzzlers ('55) R-91
- Chemicals ('55) R-81, ('56) R-83
- Chlorine ('57) R-205
- Guides for Selecting ('56) R-84
- Handling, Chemicals ('55) R-81, ('56) R-83, R-84
- Hypochlorite ('54) R-161

Fertilizer
- Soil Improver ('55) R-304
- Sludge ('53) R-203, ('54) R-228, ('55) R-304, ('56) R-317

Filter
- Diatomaceous Earth ('56) R-189, ('57) R-193
- High Rate ('57) R-185
- Instruments ('56) R-74, ('57) R-65
- Maintenance ('55) R-190
- Membrane ('56) R-106, R-109
- Surface Wash ('54) R-105
- Trickling, See: Trickling Filters
- Trickling, High Rate ('55) R-261, ('56) R-267
- Vacuum, See: Vacuum Filtration
- Washing ('54) R-105, ('55) R-199
- Washing, Rapid Sand ('54) R-105
- Water ('56) R-185

Filterability Test ('55) R-115
Filtration
- Diatomaceous Earth ('56) R-189, ('57) R-193
- Filterability Test ('55) R-115
- High Rate ('57) R-185
- Vacuum—See: Vacuum Filtration
- Water ('56) R-185, R-189

Financing
- Distribution System Extensions ('54) R-77
- Sewage Works ('55) R-20, ('56) R-23

Fire
- Hydrant, Flow Required for Towns ('56) R-135
- Hydrant Flow Gage ('56) R-154
- Protection Charges ('56) R-35
- Streams ('54) R-276
- Streams vs. Pipe Size ('56) R-135

Fittings
- Friction in ('56) R-355
- Offset Chart for 45° and 60° Screwed ('54) R-270
- Sewer Connections ('55) R-332

Flocculated Sample Collecting ('54) R-120
Flow
- Capacity and Pressure Drop ('54) R-270
- Channels, Circular and Trapezoidal ('55) R-340
- Concrete Pipe Line ('55) R-344
- Diagrams ('56) R-16, ('57) R-8
- Fire Hydrant Gage ('56) R-154
- Head Loss through Valves and Fittings ('56) R-351
- House Service Pipes ('56) R-26
- Hydrant ('54) R-83
- Measurement—See: Flow Measurement
- Measurement by Orifice ('54) R-169, ('57) R-52
- Orifice Measurement (54) R-169, ('57) R-52
- Pipe ('54) R-78, R-266
- Pitometer Surveys ('55) R-159
- Powergraph ('54) R-269
- Rate—See Also: Rates of Flow
- Required for Fires ('56) R-135
- Service Pipes, House ('57) R-52
- Sewers—Size and Slope Formula ('54) R-203
- Sewers, In ('56) R-68
- Water in Concrete Pipe Lines ('55) R-344

Flow Measurement (See Also: Flow)
- Air in Pipes ('54) R-273
- Channels, Rectangular ('54) R-276
- Concrete Pipe Line ('55) R-344
- Devices ('55) R-67, ('56) R-60
- Differential Producers ('56) R-64
- House Service Pipes ('56) R-26
- Manning's Formula ('56) R-70
- Meters and Devices, for Waste, Primary ('55) R-67, R-77, ('56) R-60
- Orifice Method ('54) R-169, ('57) R-52
- Parshall Flumes ('54) R-276
- Rate, See Also: Rates of Flow
- Reasons and Devices, ('55) R-67 ('56) R-60
- Sewer ('56) R-68
- Sewers, Circular ('54) R-274
- Water Works ('57) R-46

Fluoridation
- Automatic Control ('56) R-219
- Hydrofluosilicic Acid ('57) R-235

Flushing of Small Mains ('55) R-196
Formulas
- Industrial Wastes Rate ('55) R-330
- Manning's ('56) R-70
- Mathematical ('55) R-351
- Pipe Lengths for Inclined Diagonal Runs ('55) R-53
- Sewer—Size and Slope ('54) R-203

Freezing of Small Pipes ('56) R-224
Freezing of Tank Risers, Prevention ('54) R-144
Friction
- Entrance Losses ('55) R-346
- Flow Powergraph ('54) R-269
- Hydraulic Entrance Losses ('55) R-346
- Pipe Flow Diagram ('54) R-268
- Valves and Fittings ('56) R-355
- Water in Pipes ('56) R-357

Functional Operations ('56) R-46, ('57) R-28

G

Garbage
- Addition to Sewage ('55) R-308
- Grinding ('57) R-333

Garden Hose Packing ('56) R-343
Gas
- Engines, Dual-Fuel ('57) R-309
- Masks ('54) R-157, ('56) R-43
- Utilization ('56) R-293

Gate Valves
- Application ('57) R-161
- Care and Maintenance ('54) R-89
- Design ('57) R-161
- Selection ('57) R-145

Gears, Transmission ('54) R-206
Greases and Oils, Lubricating ('55) R-312
Grinding Garbage ('57) R-333
Grinding Screenings ('54) R-239, ('56) R-247
Grit
- Collection ('54) R-239, ('56) R-247
- Pumping ('57) R-267
- Washing ('54) R-239, ('56) R-247

Growth of Air-Conditioning ('55) R-92

H

Handling
- Chemicals (See Chemical Handling)
- Chemical Solutions ('54) R-173
- Chlorine ('56) R-83
- Sludge ('57) R-295

Hardness Reduction vs. Removal ('53) R-97
Hardness, degrees of ('54) R-86
Head (Also see: Loss of Head)
- Capacity, Efficiency, Horsepower Relationships ('56) R-362
- Conversion to Horsepower ('53) R-95
- Conversion to Pressure, Table ('54) R-175

REFERENCE AND DATA INDEX 1953 through 1957

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

Limiting, Entering ('56) R-49
Loss in Butterfly Valves ('57) R-169
Loss of—See: Loss of Head
Pressure Table ('54) R-175
Relationships ('56) R-362

Health and Copper ('55) R-118

Heat to Power Equivalents ('54) R-276

High Rate Filtration ('57) R-185

High Rate Trickling Filters ('55) R-261, R-263 ('56) R-267

Home Service Demands ('53) R-62

Horsepower
Capacity, Efficiency, Head Chart ('56) R-362
Conversion to Head ('53) R-95
Measurement ('53) R-95, ('56) R-58, R-362

House Connections, Sewabazooka ('53) R-209

House Service Pipes, Flow in ('56) R-26, ('57) R-62

How to
Align Shafts ('56) R-270
Collect, Store and Use Data ('57) R-365

Humus Production ('57) R-296

Hydrant
Discharge Measurement ('54) R-83
Fire Streams ('54) R-276
Flow Gage ('56) R-154
Maintenance ('55) R-187

Hydraulics
Entrance Losses ('55) D-346
Hydrant Discharge ('54) R-83
Loss of Head in Pipe and Fittings ('56) R-351
Single Pipe Lines ('56) R-359

Hydrofluosilicic Acid ('57) R-235

Hydrogen Sulfide Determination
Method ('56) R-330
Hydrogen Sulfide in Sewers ('57) R-249

Hypochlorite Feeders ('54) R-161

I

I-Beams ('55) R-321

Impact of Industry on Water Supply ('57) R-244

Incentive Plan, Meter Repair ('57) R-179

Incinerators, Flash Drying R-325

Incinerator, Multiple Hearth ('57) R-317

Incinerators, Sludge ('57) R-317

Indicators, Alkalinity ('56) R-195

Industrial Wastes
Chlorination ('53) R-197
Effect on Stream Pollution ('57) R-244
General Discussion ('56) R-327, ('57) R-341
Instrumentation ('55) R-72
Neutralization, Lime ('55) R-315
Oil ('53) R-177
Ordinance Requirements ('57) R-342
Problems and Processes ('56) R-327
Processes and Problems ('56) R-322
Rate Formulas ('55) R-230
Toxic Limits ('53) R-202
Trailer ('56) R-328

Inhibitors for Acid Cleaning ('57) R-238

Inquiry, Centrifugal Pump ('53) R-50

Inspecting Steel Water Tanks ('57) R-129

Instrumentation
Control ('56) R-73, R-74, ('57) R-54, R-65
Filter ('57) R-64
Industrial Waste ('55) R-73
Maintenance ('56) R-74
Sewage Works ('56) R-67, R-77, ('57) R-54
Water Works ('57) R-54

Interstate Pollution Control Agencies ('57) R-4

Introduction to Water & Sewage Works ('55) R-13, ('56) R-13, ('57) R-3

Ion Exchange ('57) R-222

Iron Removal ('55) R-217, ('56) R-209, ('57) R-225

J

Jointing and Laying Sewer Pipes ('55) R-329

L

Laboratory
Control ('55) R-113
Filterability Test ('55) R-115
Methods ('57) R-95
Methods, Membrane Filter ('56) R-106, R-109, ('57) R-103

Lagoons ('56) R-281

Lagoons, Raw Sewage ('57) R-269

Land Measure ('56) R-336

Laying and Jointing Sewer Pipes ('55) R-329

Leaks
Cost ('53) R-86
Electronic Equipment for Locating ('53) R-87
Locating ('53) R-87
Surveys ('55) R-159
Water Losses from ('53) R-116

Legal Problems ('55) R-34

Levelling Shafts ('56) R-270

Lime
Buying and Using ('55) R-315
Characteristics ('57) R-72
Control of Corrosion ('57) R-91
Digestion Control ('56) R-289
Pulverized ('57) R-216
Slaking ('57) R-72
Water Softening ('57) R-216

Limiting Entering Head ('56) R-49

Lines, Blowing Out Service ('53) R-79

Lining Water Mains ('54) R-23, ('55) R-169

Literature ('55) R-17, ('56) R-17

Loading
Beams, I ('55) R-321
Beams, Wooden ('55) R-330, R-321
Block and Tackle Chart ('54) R-91

Loss of Head
Butterfly Valves ('57) R-169
Entrance ('55) R-346
Fittings ('56) R-351
Pipe and Fittings ('56) R-351
Pipe Flow ('54) R-269

Loss of Water, Causes and Prevention of ('55) R-222

Lubricated Plug Valves ('56) R-149, ('57) R-166

Lubricating Greases and Oils ('55) R-312

Lubrication Check Sheet ('55) R-313

Lubrication, Equipment ('57) R-106

M

Maine Lin Metering ('54) R-55, ('56) R-62

Mains
Air Flushing, Compressed ('55) R-196
Capacity, Carrying ('54) R-82
Cleaning and Lining ('54) R-23, ('55) R-169, ('57) R-136
Compressed Air Flushing ('55) R-196
Dewatering with Compressed Air ('58) R-66
Disinfection ('54) R-170
Extensions ('56) R-138
Laying with Transit Crane ('57) R-356
Lining ('54) R-23, ('55) R-169
Sterilization ('54) R-170

Maintenance
Acid Cleaning of Pipe ('57) R-238
Air Diffuser ('57) R-281
Centrifugal Pump ('55) R-48, ('56 R-56
Color Codes in Plants ('54) R-135, ('57) R-110
Dual-Fuel Engines ('57) R-309
Elevated Tanks ('56) R-157, R-161, R-166, R-172
Equipment, Pump ('54) R-204-R-208
Filter Instruments ('56) R-74
Filters ('55) R-199
Gate Valves ('54) R-89
Gears ('54) R-206
General ('57) R-105
Hydrant ('55) R-187
Instruments ('56) R-74
Meter Shop Layout ('55) R-192
Lubrication ('57) R-106
Meter ('57) R-176, R-179, R-183
Meter Cleaning ('57) R-183
Meters, Sewage ('56) R-320
Paint Protection ('56) R-345
Pipe Freezing ('56) R-224
Pipe Painting ('53) R-78
Piping Color Codes ('57) R-110
Plug Valves ('57) R-166
Practices, Preventive ('53) R-139, ('55) R-125, R-127
Pump, Deep Well ('55) R-44, 47
Pump, Sewage ('56) R-253
Service Line Cleaning ('53) R-79
Sewage Treatment Works, Primary ('53) R-139, ('55) R-245, ('56) R-247
Sewer ('53) R-133, ('55) R-237, R-241 ('56) R-239
Steel Water Tanks ('56) R-157, ('57) R-129
Tanks ('56) R-161, R-166, R-172, ('57) R-129
Trickling Filters and Clarifiers ('54) R-207
Valve ('55) R-187
Valves, Gate ('54) R-89
V-Belt Tension ('57) R-166
Ventilating Equipment ('54) R-266
Well Capacity ('55) R-139, ('56) R-121, ('57) R-115, 117

REFERENCE AND DATA INDEX 1953 through 1957

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

Management
Also see: Administration
Accounting and Contact, Customer ('55) R-25
Administrative Practices, Better ('57) R-19
Financing Sewage Works ('55) R-20, ('56) R-23
General ('56) R-20, ('57) R-9
Incentive Pay Plan, Meter Repair ('57) R-179
Legal Problems ('55) R-34
Outline ('56) R-20
Problems ('56) R-21
Records ('56) R-29
Supply and Services Purchasing ('53) R-21

Manganese Removal ('55) R-217, ('57) R-225

Manholes and Sewers, Lost ('54) R-202

Manning's Formula ('56) R-76

Manuals on Water and Sewage Works ('56) R-17 ('57) R-6

Map and Plan Storage ('56) R-34

Materials
Resistant, for Chemical Handling ('54) R-173
Weights of ('55) R-321

Mathematical Formulas ('55) R-351

Mathematics, Simple ('55) R-351

Measurement
Flow ('55) R-67 ('56) R-60
Flow in Sewers ('56) R-68
Flow, in Water Works ('57) R-46
Horsepower ('53) R-95 ('56) R-362
Hydrant Discharge ('54) R-93
Industrial Waste ('55) R-67, R-73
Land ('56) R-336
Orifice, Flow ('54) R-169, ('57) R-52
Pressure for Different Heads ('54) R-175
Sewage ('55) R-67, ('56) R-68
Water Flow by Orifice, Circular ('54) R-169

Mechanism of Corrosion ('56) R-99

Membrane Filter
Application ('57) R-103
Water Supply Control, ('56) R-106

Mercury and Water Equivalents ('54) R-276

Metering
Benefits of ('56) R-175
Main Lines ('54) R-55, ('56) R-62
Practical Methods ('54) R-111

Meters
Benefits of ('56) R-175
Cleaning, Solvent ('57) R-183
Incentive Plan for Repair ('57) R-179
Main Line ('54) R-55 ('56) R-62
Main Line, Selection ('54) R-55, ('56) R-62
Maintenance ('56) R-320 ('57) R-176, R-179, R-183
Maintenance Shop Layout ('55) R-192
Methods, Practical ('54) R-111
Propeller ('56) R-62
Reading ('57) R-173
Renovating ('56) R-179
Repairs, Incentive Plan for ('57) R-179
Sewage ('56) R-320
Sewage Works ('55) R-67, R-77
Shop Output ('57) R-179

Metric Conversion Table ('53) R-64

Mixing ('57) R-77

Motor Starting Trouble ('57) R-38

N

Net Positive Suction Head ('56) R-49

Nomographs
Block and Tackle ('54) R-91
Chlorination Control ('55) R-278
Conical Pile Contents ('55) R-242
Cylindrical Tank Contents, Horizontal ('56) R-356
Expansion Chart ('55) R-254
Flow in Channels and Conduits ('55) R-340
Flow in Concrete Pipe Lines ('55) R-344
Flow Powergraph ('54) R-269
Hydraulic Entrance Losses ('55) K-346
I-Beam Loadings ('55) R-321
Main Sterilization, Water ('54) R-171
Manning's Formula ('56) R-71
Pipe Bending ('56) R-244
Pipe Capacity ('55) R-338
Pipe Flow ('54) R-78, R-268
Pipe Size, Equivalent ('57) R-362
Pumping Costs ('57) R-240
Rectangular Tank Contents, ('55) R-354
Tank Contents, Cylindrical ('56) R-365
Weir Capacity, Rectangular ('55) R-349
Weir Capacity, V-Notch ('55) R-350
Wooden Beams, Loadings ('55) R-320, R-321
Wooden Beams, Loadings ('55) R-320, R-321

Non-Revenue Water ('53) R-64, ('55) R-115

Number of Pipe Taps ('56) R-361

O

Odor
Sewage ('57) R-337
Water-See: Tastes and Odors

Office Operations ('56) R-27, R-29, R-34

Ohmmeter Technique for Flow Measurement ('56) R-68

Oil Waste Exclusion from Sewers ('53) R-177

Operation
Activated Sludge ('54) R-211
Activated Sludge Plant ('53) R-179
Centrifugal Pumps ('55) R-48
Costs, Water Works ('57) R-15
Dual Fuel Engines ('57) R-309
Electrical Equipment ('56) R-59
Feeders, Chemical ('55) R-91
Functional ('56) R-46, ('57) R-28
Lubrication Check Sheet ('55) R-313
Meter Maintenance Shop ('55) R-192
Office ('56) R-34
Pneumatic Storage Tanks ('53) R-80
Pump, Sewage ('54) R-233
Sewage Treatment Works, Primary ('55) R-245, ('56) R-247
Sewage Works ('55) R-225, ('56) R-227, R-225, ('57) R-241
Sewer ('55) R-237
Sludge Volume Index Test ('53) R-183
Small Plants ('56) R-183
Trickling Filters ('53) R-186
Water Works ('55) R-129 ('56) R-113, ('57) R-113
Water Works-Activated Silica ('53) R-107
Water Works, Small ('56) R-183
Well ('55) R-139

Orifice, Flow Measurement ('54) R-169, ('57) R-52

Ordinances, Industrial Waste ('57) R-342

Ounce Equivalents, Mercury-Water ('54) R-276

Oxygen Demand, Biochemical ('53) R-185

P

Packing
"Don'ts" ('57) R-160
Garden Hose ('56) R-343
Handling ('57) R-160
Stuffing Box ('57) R-160

Packages, Chlorine ('56) R-197

Painting
Elevated Tanks ('56) R-166, R-172
Pipes, Damp Water ('53) R-78
Sewage Works ('56) R-345
Steel Water Tanks ('57) R-129
Tanks, Steel Water ('57) R-129
Whitewash, "government" ('54) R-144

Parshall Flume Table ('54) R-276

pH
Alkalinity Indicators ('56) R-195
Control with Lime ('55) R-315
Lime, Control with ('57) R-72
Zones ('55) R-336

Physical Constants of Water ('57) R-362

Piles, Conical Contents ('55) R-242

Pipe
Air Flow ('54) R-273
Bending Chart ('56) R-244
Capacity and Velocity Chart ('55) R-338
Cast-Iron, Cutting ('57) R-358
Clay, Velocity and Discharge in ('56) R-70
Cleaning, Acid ('57) R-238
Codes, Color ('54) R-135, ('57) R-110
Color Codes ('54) R-135, ('57) R-10
Commercial Size for Fire Stream ('56) R-135
Concrete, Flow in ('55) R-344
Copper and Brass, Capacity and Pressure Drop ('54) R-270
Corrosion ('56) R-99
Cutting Large Diameter ('57) R-358
Damp Water, Painting ('53) R-78
Diagonal Runs, Calculation ('55) R-63
Equation of ('56) R-358
Equivalent Size Nomograph ('57) R-362
Fittings, Offset Chart for 45° and 60° Screwed ('54) R-270
Flow ('54) R-78
Flow Diagram ('54) R-268
Flow from Hydrants ('54) R-83
Flow Powergraph ('54) R-269
Freezing of ('56) R-224
Friction of water in ('56) R-357
Friction Reduced by Chlorination ('55) R-209, ('57) R-116
Growths Controlled by Chlorination ('55) R-209 ('57) R-116
Hydraulics of Single Lines ('56) R-359
Laying and Joining of Sewer ('55) R-329
Line Carrying Capacity ('54) R-82
Locating ('53) R-87
Loss of Head ('56) R-351
Orifice ('54) R-169, ('57) R-52
Repairs Small ('56) R-224
Sewer Capacity of ('55) R-332
Sewer Connections ('55) R-332
Sewer, Laying and Jointing ('55) R-329
Taps ('56) R-361
Thawing ('57) R-133
Velocity ('55) R-338, R-345

Pitometer Surveys ('55) R-150

REFERENCE AND DATA INDEX 1953 through 1957

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

Planning Water Service, Long Range ('57) R-10
Plans, Storage of ('56) R-34
Plant Electricity ('55) R-57
Plastic Test Bottle ('57) R-239
Plug Valves ('56) R-149, ('57) R-166
Plumbing Fixture Water Uses ('53) R-62
Pneumatic Storage Tank Operation ('53) R-80
Pollution Control and Water Supply ('54) R-177 ('55) R-133, R-131, ('56) R-114
Population and Water Use Growth ('55) R-31
Power
Equivalents to Heat ('54) R-276
Flow Powergraph ('54) R-269
Practical Electricity ('55) R-57
Packages, Chlorine ('56) R-197
Pressure
Conversion to Head, Table ('54) R-175
Fire Streams ('54) R-276
Heads of Water ('54) R-175
Pipe Loss of-in Copper and Brass ('54) R-270
Regulators ('56) R-142
Prevention of Water Losses ('55) R-115
Preventive Maintenance Practices ('53) R-189, ('55) R-127, R-125
Primary Flow Measurement Devices ('55) R-67, R-77, ('56) R-60
Primary Treatment
See Also Sewage Treatment, Primary Units
Equipment ('57) R-257
Lagoons ('57) R-269
Settling Units ('57) R-257
Tanks ('57) R-257
Propeller Type Meters ('56) R-62
Protective Coatings
Paint ('53) R-70, R-78, ('54) R-144, ('56) R-166, R-172, R-345
Steel Water Tanks ('57) R-129
Public Relations
Customer Accounting and Contact ('55) R-25
Sewage Works ('57) R-23
Pumps
Altitude, Effect of ('55) R-337
Centrifugal: See Centrifugal Pump
Centrifugal Inquiry ('53) R-50
Characteristics, Centrifugal ('53) R-32
Costs ('57) R-33
Deep-well ('55) R-44, R-47
Deep Well, Testing ('55) R-49
Definitions ('53) R-27
General ('55) R-45, ('56) R-48
Head Terms ('53) R-27
Limiting Entering Head ('56) R-49
Maintenance ('54) R-204 R-208, ('55) R-44, R-47
Model ('53) R-33
Motors ('57) R-38
Multi-speed ('57) R-29
NPSH ('56) R-49
Packing with Garden Hose ('56) R-343
Rating Curves, Centrifugal ('53) R-38
Replacement ('57) R-33
Sewage, Maintenance ('56) R-233
Specific Speed ('53) R-38
Stations, Sewage ('55) R-323
System Needs, Determining ('53) R-43
Pumping
See Also: Pumps
Altitude Effects ('55) R-337
Cost Determination ('57) R-240
Equipment ('54) R-204
General ('55) R-43, ('56) R-48
Grit ('57) R-267
Plant Design, Sewage ('56) R-341
Sewage and Sludge ('54) R-199
Sludge ('57) R-267
Sludge and Sewage ('54) R-199
Station, Sewage ('57) R-347
Terminology ('56) R-243
Warm Water ('56) R-58
Purchase of Deepwell Pumps ('55) R-44, 47

Q

Quality Control of Water ('56) R-117
Quicklime: See Lime

R

Racks ('54) R-247
Rates
Industrial Wastes ('55) R-230
Water ('57) R-15
Rates of Flow
Air in Pipes ('54) R-273
Channels, Rectangular ('54) R-275
Fixtures ('53) R-62
Sewers, Circular ('54) R-274
Raw Sludge, Vacuum Filtration ('57) R-313
Reading Meters ('57) R-173
Recarbonation ('55) R-216
Reclamation of Waste Water ('54) R-219
Recording, Chlorine Residual ('57) R-213
Records, Commercial ('56) R-39
Recovery Characteristics of Differential Producers ('56) R-66
Rectangular Tanks, Contents of ('55) R-354
Reference Manuals & Books ('56) R-17, ('57) R-6
Regulators, Pressure ('56) R-142
Remote Control ('56) R-78
Removal
Hardness ('53) R-97
Iron and Manganese ('55) R-217, ('57) R-225
Manganese and Iron ('55) R-217, ('57) R-225
Rentals, Sewer ('57) R-18
Repainting Steel Water Tanks ('56) R-172, ('57) R-129
Repair of Lubricated Plug Valves ('57) R-166
Repair of Small Pipes ('56) R-224
Reservoir
Steel Tanks ('56) R-157
Tanks, Steel as Distribution ('54) R-33
Resistant Materials for Handling Chemical Solutions ('54) R-173
Revenues, Water ('57) R-15, R-176
Risers, Prevention of Freezing of Tank ('54) R-144

S

Safety
Chart ('57) R-27
Chlorine Handling ('54) R-146 ('55) R-39 ('56) R-43
Color Coding in Plants ('54) R-135, ('57) R-110
Copper and Health ('55) R-118
Dollar Saving Program ('57) R-25
Gas Masks ('54) R-137 ('56) R-43
Industrywide Program ('55) R-37
Program ('55) R-37, ('57) R-25
Sewage Works ('56) R-42
Water Works ('55) R-37, ('56) R-42
Sampler, Continuous, for Deep Sewers ('55) R-122
Samples, Collection of Flocculated ('54) R-120
Sampling Sewage ('55) R-122
Sand Washing, Filter ('54) R-105
Sanitary Engineers Directory, State ('57) R-5
Screening, Sewage ('54) R-239, ('56) R-247
Secondary Treatment See: Activated Sludge, Trickling Filters, Lagoons, and Sewage Treatment, Secondary
Sedimentation
Equipment ('57) R-257
Notes on ('55) R-95, R-99, ('56) R-91, ('57) R-77
Units ('57) R-257
Selecting Valves for Water Service ('57) R-145
Selection of Chemical Feeders ('56) R-84
Service Charges ('55) R-20, ('56) R-32
Service Lines, Blowing Out ('53) R-79
Settling Tanks ('57) R-257
Sewabazooka for House Connections ('53) R-209
Sewage
Authorities ('57) R-13
Chlorination ('53) R-197 ('55) R-277, ('56) R-283, ('57) R-291
Chlorination Control ('55) R-278
Flow Measurement Devices ('55) R-67, R-77, ('56) R-60
Garbage, Addition to ('55) R-308, ('57) R-333
Grit: See Grit
Lagoons ('56) R-261, ('57) R-269
Meter Maintenance ('56) R-320
Odor Counteraction ('57) R-337
Pumping ('54) R-199
Pumping Plant Design ('56) R-341
Pumps, Multi-speed ('57) R-29
Sampler, Continuous ('55) R-122
Screening ('54) R-239, ('56) R-247
Sedimentation ('57) R-77, R-257
Sludge: See sludge
Sludge As Fertilizer ('54) R-228
Symbols in ('56) R-324
Treatment: See Sewage Treatment
Works: See Sewage Works
Sewage Treatment
Activated Sludge Process ('54) R-271
Chlorination ('53) R-197 ('55) R-277, ('56) R-283, ('57) R-291

REFERENCE AND DATA INDEX 1953 through 1957

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

Equipment ('54) R-234
Grit Collection & Washing ('54) R-239, ('56) R-247
High-Rate Trickling Filters ('56) R-267
Lagoons ('56) R-261, ('57) R-289
Primary Units ('55) R-245, ('56) R-246, R-247, ('57) R-257
Pumping Station Design ('56) R-341, ('57) R-347
Reclamation and Disposal ('54) R-219
Secondary ('55) R-257, ('56) R-261, R-267, R-271
Sludge Dewatering, Drying & Incineration ('55) R-291
Stream Pollution ('56) R-227
Vacuum Filtration: See Vacuum Filtration
Wastes, Toxic Limits ('53) R-202

Sewage Works
Authorities ('57) R-13
Automation ('57) R-54
Books ('56) R-17, ('57) R-6
Chlorine Procedures for Use In ('55) R-93
Corrosion ('57) R-99
Equipment Lubrication ('57) R-106
Financing ('55) R-29 ('56) R-23
Flow Diagrams ('57) R-8
Instruments ('55) R-67, R-77
Introduction to ('55) R-13, R-225, ('56) R-13, R-225, ('57) R-3, R-241
Laboratory Methods ('57) R-95
Library: See Books
Lubricating Greases and Oils in Plants ('55) R-312
Lubrication Check Sheet ('56) R-313
Maintenance ('53) R-139
Maintenance, Paint Protection ('56) R-345
Meters ('55) R-67, R-77
Operation ('55) R-225 ('56) R-225, R-227 ('57) R-241
Practices Introduction ('55) R-13, ('56) R-13
Primary Treatment ('55) R-245, ('56) R-247
Public Relations ('57) R-23
Pumping Station Design ('57) R-347
Pumps, Multispeed ('57) R-29
Pump Station Design ('55) R-323
Pumping Plant Design ('56) R-341
Safety See Safety
Safety Poster ('57) R-27
Sedimentation Tanks ('57) R-257
Service Changes ('55) R-20 ('56) R-23
Supply and Service Purchasing ('53) R-21
Tools ('53) R-208, ('54) R-234

Sewer
Circular, Rate of Flow ('54) R-274
Clay Pipes, Velocity and Discharge in ('56) R-70
Cleaning with Rubber Beach Balls ('54) R-223
Connections ('55) R-332
Construction ('57) R-331
Design ('56) R-337
Extension Charges ('57) R-13
Financing ('54) R-184
Flow Measurement ('56) R-68
Hydrogen Sulfide Control ('57) R-249
Improvement Financing ('54) R-184
Lost, and Manholes ('54) R-202
Maintenance ('53) R-133, ('55) R-237, R-241, ('56) R-239
Manholes, Lost ('54) R-202
Oil Waste Exclusion ('53) R-177
Operation ('55) R-237
Pipe Capacity ('55) R-332
Pipes, Laying and Jointing ('55) R-329
Rentals ('57) R-13
Sampler, Continuous ('55) R-122
Service Charges ('56) R-23
Size and Slope Formula ('54) R-203

Shafts, Aligning ('56) R-270

Silica, Activated ('56) R-95 ('57) R-78

Slaking Lime ('57) R-72

Sludge
Activated, Volume Index ('53) R-188
Beds, Weed-free ('56) R-318
Concentration ('53) R-206
Density to Volume Ratio ('53) R-206
Dewatering—Also see Elutriation
Digestion, Per Cent ('55) R-290
Disposal ('55) R-281, R-293, ('56) R-292
Dryers ('57) R-317
Drying ('55) R-291
Elutriation ('55) R-291, ('56) R-308
Fertilizer ('53) R-203, ('54) R-228, ('55) R-304, ('56) R-317
Handling ('57) R-295
Humus Production ('57) R-296
Incineration ('55) R-291
Incinerators ('57) R-317
Pumping ('54) R-199, ('57) R-267
Raw, Vacuum Filtration ('57) R-313
Soil Improver ('55) R-304
Utilization ('53) R-203, ('55) R-304, ('56) R-317
Vacuum Filtration ('55) R-293
Volume—Density Relation ('53) R-206
Volume Index ('53) R-183

Sludge Digestion
Gas Utilization ('56) R-293
Lime for Control ('55) R-289
Per Cent Chart ('55) R-290
Practice ('57) R-296
Production of Humus ('57) R-296
Tanks ('56) R-296
Utilization ('56) R-293
Equipment ('56) R-209, ('57) R-228

Soap Consumption in Hard Water ('54) R-86

Softening
Demineralization ('57) R-222
Hardness Reduction vs. Removal ('53) R-97
Iron Removal ('54) R-209, ('57) R-235
Quickline, Pulverized ('57) R-216
Lime ('57) R-72
Recarbonation ('55) R-216
Water ('53) R-97, ('55) R-213, ('56) R-209

Solids Disposal ('55) R-281, R-291, ('56) R-292

Solids Handling ('57) R-295

Solvent, Meter Cleaning ('57) R-183

Source of Supply ('55) R-131, R-133

Specifications, Steel Tanks ('56) R-157

Spot Test for Sulfides ('54) R-208

Spraying for Disinfection of Tanks ('53) R-77

Square Roots of Numbers ('56) R-364

Squares of Numbers ('56) R-364

Standard Methods ('57) R-95

State and Interstate Pollution Control Agencies ('57) R-4

State Sanitary Engineers Directory ('57) R-5

Steel Water Tank Repainting ('53) R-70

Sterilization, Water Main ('54) R-170

Storage
Distribution System ('55) R-146
Maps and Plans ('56) R-34
Peak Demand ('57) R-122
Reservoirs ('54) R-33
Tanks, Inspecting and Painting ('57) R-129

Stream Pollution
Impact of Industry on ('57) R-244
Industrial Waste ('57) R-244
Sewage Treatment ('56) R-227
Use of Streams ('55) R-177, ('56) R-227

Streams, Equitable Use of ('55) R-227

Streams, Fire ('54) R-276

Sulfide Spot Test ('54) R-208

Surfaces, Area, Volume Calculations ('55) R-351

Surface Wash ('54) R-105

Surveys
Industrial Waste ('56) R-328
Pitometer ('55) R-159

Syndets
Determination of ('56) R-111
Municipal Sewage ('56) R-324

T

Table of Contents ('55) R-2, ('56) R-2, ('57) R-2

Tables
Alkalinity Equivalents ('55) R-334
Area of Circles ('56) R-364
Atmospheric Pressures and Barometric Readings ('55) R-333
Barometric and Atmospheric Pressure Readings ('55) R-333
Chlorine Characteristics ('55) R-210
Circles, Area of ('56) R-364
Concrete Proportioning ('53) R-126, ('54) R-135
Conversion—See: Conversion Tables
Conversion—Oz Water to In. Mercury ('54) R-276
Decimal Equivalents ('55) R-104
Degrees of Hardness ('54) R-86
Discharge—See Also Discharge Tables
Dry Feed Dosage ('54) R-108
Equations of Pipes ('56) R-358
Fire Streams ('54) R-276
Friction of Water in Pipes ('56) R-357
Heat and Power Equivalents ('54) R-276
Horsepower, Conversion to Head ('53) R-98
Materials, Weights ('55) R-221
Metric Conversion ('53) R-64
Number of Pipe Taps ('56) R-361
Parshall Measuring Flumes Free-Flow Discharge ('54) R-276
Pipe Line Carrying Capacity ('54) R-32
Power and Heat Equivalents ('54) R-276
Pressure for Different Heads of Water ('54) R-178
Soap Consumption in Hard Water ('54) R-86
Sewer Pipe Capacity ('55) R-332
Square Root of Numbers ('56) R-364
Square of Numbers ('56) R-364
Velocity in Pipes ('55) R-328, R-345
Weights and Measures ('55) R-358
Weights of Materials ('55) R-221

Tanks
Capacity Table ('56) R-363
Cylindrical, Contents of ('55) R-355, R-356, ('56) R-363
Disinfection by Spraying ('53) R-77
Elevated Storage, Steel ('55) R-146, ('56) R-157, R-161, R-166, R-172
Inspecting and Repainting ('57) R-129
Maintenance ('56) R-157, R-161, R-166
Pneumatic Storage ('53) R-80

REFERENCE AND DATA INDEX 1953 through 1957

Rectangular, Contents of ('55) R-354
Riser Freezing Prevention ('54) R-144
Sludge Digestion ('56) R-296
Steel as Distribution Reservoirs ('54) R-83
Steel Water, Repainting ('57) R-129
Storage ('57) R-122

Taps from Pipes ('56) R-361

Taps, Number of, in Pipe ('56) R-361

Tastes & Odor
Activated Carbon Control ('53) R-123
Control ('56) R-192, ('57) R-197, R-198

Technical Data ('57) R-360

Technical Reports ('56) R-18

Terminology in Pumping ('56) R-243

Titration, Amperometric ('57) R-213

Tools for Sewage Works ('53) R-208

Toxic Wastes Limit in Sewage ('53) R-202

Trailers for Industrial Surveys ('56) R-328

Transit Crane ('57) R-356

Trapezoidal Channels, Flow in ('55) R-340

Treatment—See: Sewage Treatment, Water Treatment

Trenching Practice ('56) R-333

Trickling Filters
General Discussion ('55) R-258, ('57) R-275
High Rate ('55) R-261, ('56) R-267
Maintenance ('54) R-207
Operation ('53) R-186

Triturators ('54) R-247

Troubleshooting: See Maintenance

U

Unaccounted-for Water ('53) R-64, ('55) R-115
Utilization
Gas ('56) R-293
Sludge ('53) R-203,('55) R-304,('56) R-317
Streams ('55) R-227

V

Vacuum Filtration
Blankets for Filters ('56) R-309
Equipment ('54) R-255
Raw Sludge ('57) R-313
Sludge ('55) R-293,('57) 313

Valves
Altitude ('56) R-142
Butterfly ('57) R-169
Friction in ('56) R-355
Gate, Care and Maintenance ('54) R-89
Gate, Selection ('57) R-145, R-161
Maintenance ('55) R-187
Plug ('56) R-149, ('57) R-166
Selecting ('57) R-145

V-Belts ('57) R-108

Velocities
Clay Sewer Pipe ('56) R-70
Pipes ('55) R-338, R-345
Sewer, Size and Slope Formula ('54) R-203

Ventilating Equipment Maintenance ('54) R-206

Volume, Surface, Area Calculations ('55) R-351

W

Washing and Maintenance of Filters ('54) R-105, ('55) R-199

Waste Water
Flow Measurement Devices ('55) R-67, R-77, ('56) R-60
General ('55) R-115, ('56) R-22
Reclamation and Disposal ('54) R-219

Water
Air-Conditioning Equipment Use ('55) R-224
Chemistry ('55) R-95, R-99, ('56) R-91, ('57) R-77
Chlorination Control ('55) R-278
Chlorination, Notes On ('55) R-268
Coagulation ('55) R-95, R-97, ('56) R-91, ('57) R-77
Control Watershed ('56) R-117
Conversion—Ounce to Mercury In. ('54) R-276
Cooling Scheme ('54) R-71
Corrosion ('56) R-99
Costs ('57) R-15
Demands for Home Fixtures ('53) R-62
Demineralized ('57) R-232
Filterability Test ('57) R-115
Filtration ('56) R-185, R-189
Fluoridation—See: Fluoridation
Hardness Reduction vs. Removal ('53) R-97
Losses, Causes and Protection of ('55) R-222
Main, Cleaning and Lining ('54) R-23, ('55) R-169
Main Sterilization ('54) R-170
Non-Revenue ('53) R-64,('55) R-115
Ounce Equivalents in Inches of Mercury ('54) R-276
Physical Constants ('57) R-361
Pipes, Damp, Painting ('53) R-78
Pollution Control Agencies ('57) R-4
Pressure for Different Heads ('54) R-175
Pumps, Multi-speed ('57) R-29
Rates ('57) R-15
Requirements for Uses and Fixtures ('53) R-62
Revenues ('57) R-15
Sedimentation ('57) R-77
Service Planning ('55) R-31, ('57) R-10
Services, Design ('54) R-69
Softening ('53) R-97, ('55) R-213,('56) R-209, ('57) R-216, R-222,R-225
Supply—See Water Supply
Treatment—See Water Treatment
Unaccounted-for (See Water Non-Revenue)
Underground Cooling Scheme ('54) R-71
Uses and Fixture Demands ('53) R-62
Warm, Pumping ('56) R-58
Waste—See Also Waste, Water
Well Operation and Maintenance ('55) R-139

Watershed Control ('56) R-117

Water Supply
Demand, Future ('55) R-31, ('57) R-10
Dwindling of ('54) R-177, ('55) R-133, R-131, ('56) R-114
Impact of Industry on ('57) R-244
Industrial Impact on ('57) R-244
Iron and Manganese Removal ('55) R-217, ('57) R-225
Manganese and Iron Removal ('55) R-217, ('57....) R-225
Planning ('55) R-31, ('57) R-10
Source, Adequate ('55) R-131, R-133

Water Treatment
Activated Silica ('53) R-107, ('56) R-95, R-98, ('57) R-78
Coagulation Aids ('53) R-107, ('56) R-95, R-98, ('57) R-78, R-83
Fluoridation—See: Fluoridation
Notes, General ('56) R-181, ('57) R-184
Processes ('56) R-181
Softening: See Softening ('56) R-209

Water Works
Administration ('56) R-27
Automation ('57) R-54
Books ('56) R-17, ('57) R-6
Chlorine Procedures for Use In ('55) R-93
Color Coding ('54) R-135
Compressed Air in ('57) R-231
Corrosion Problems (See Corrosion) ('57) R-97
Costs, Operation ('57) R-15
Flow Diagrams ('57) R-6
Flow Measurement ('57) R-46
Instrumentation ('56) R-73, R-74, ('57) R-54, R-65
Introduction to ('55) R-13, ('56) R-13, ('57) R-3
Laboratory Methods ('57) R-95
Legal Problems ('55) R-34
Library—See: Books
Equipment Lubrication ('57) R-106
Operations ('55) R-129, ('56) R-113, ('57) R-113
Pitometer Surveys ('55) R-159
Practices—Introduction ('55) R-13, ('56) R-13
Pumps, Multi-speed ('57) R-29
Rates, Revenues and Costs ('57) R-15
Remote Control ('56) R-78
Revenue ('57) R-15, R-176
Safety: See Safety
Safety Program ('57) R-26
Service and Supply Purchasing ('53) R-21
Services, Design ('54) R-69
Small, Design and Operation of ('56) R-183
Supply and Service Purchasing ('53) R-21
Valves, Selection ('57) R-145

Weed-free Sludge Beds ('56) R-318

Weights and Measures ('55) R-358

Weights of Materials ('55) R-221

Weir Capacity, Rectangular ('55) R-349

Weir Capacity, V-Notch ('56) R-350

Wells
Capacity ('57) R-115, R-117
Cleaning ('56) R-121
Maintenance ('57) R-115, R-117
Operation and Maintenance ('55) R-139
Pump, Deep ('55) R-44, R-47, R-49
Rehabilitation ('57) R-115, R-117

Whitewash, "Government" ('54) R-144

Wooden Beams ('55) R-320

Zeolites ('57) R-222

All subjects in this and previous issues are listed with the respective keys—('53), ('54), ('55), ('56) or ('57)

AUTHOR INDEX-REFERENCE AND DATA SECTION—1953 through 1957

A

Abrams, A. and Wagner, C. L. ('57) R-238
Albert, Paul Mc H. ('55) R-340, ('56) R-70 ('57) R-363
Alexander, L. J. ('55) R-44
Applebaum, S. B. ('57) R-225
Armbrust, H. N. ('57) R-193
Arnold, G. E. ('57) R-179

B

Baffa, John J. ('55) R-73
Barnes, Lewis L. ('55) R-224
Baylis, John R. ('55) R-199, ('57) R-185
Beckwith, Homer E. ('53) R-64, ('54) R-47, ('55) R-222, ('56) R-52
Bennett, Richard ('54) R-187, ('56) R-333
Bennison, E. W. ('55) R-139
Bernard, Harold ('53) R-87
Black, A. P. ('55) R-99
Black, Charles A. ('54) R-129, ('56) R-95
Blair, George Y. ('55) R-209
Bloodgood, Don E. ('53) R-183, ('56) R-227, ('57) R-275
Boggis, M. C. and Potthoff, E. O. ('57) R-38
Bowerman, F. R. (See Rawn, A. M.)
Brown, R. F. ('55) R-196
Burdick, Charles B. ('55) R-146
Burley, Fred H. ('53) R-207, ('55) R-200
Bush, John H. ('56) R-106

C

Camp, Thomas R. (See Root, Darrell A.)
Caplan, L. R. ('57) R-117
Carter, Roy and Karassik Igor J. ('53) R-23, R-50
Caster, Arthur D. ('56) R-328
Coburn, Stuart E. ('53) R-202, ('55) R-335
Coffman, Jr., Paul A. ('54) R-115, ('56) R-84
Colony, William M. ('54) R-191, ('56) R-239
Conlon, D. J. ('57) R-357
Conn, L. A. ('56) R-318
Cranch, E. T. ('54) R-262
Croft, Don K. and Faust, Samuel D. ('56) R-324
Cromwell, C. E. ('57) R-38
Cunningham, Morrison B. ('56) R-175

D

Davis, S. H. ('53) R-79
Day, Ray ('57) R-331
Dick, I. B. ('57) R-222
Dreier, Douglas E. ('53) R-186

E

Eisner, Benjamin ('54) R-261
Eldridge, E. F. (See Neale, Alfred T.)
Eliassen, Rolf ('57) R-103
Eliasson, Rolf and Lamb III, James C. ('56) R-99
End, William F. ('55) R-181, ('56) R-142
Enslow, L. H. and Symons, Geo. E. ('56) R-17
Esty, Roger W. ('54) R-89
Eye, John D. ('56) R-68

F

Faber, H. A. ('57) R-6
Faust, R. J. ('55) R-37
Faust, S. D.; Croft, D. K., and ('56) R-111
Fitzgerald, R. W. and North, Ernest C. ('55) R-25
Flood, F. L. ('56) R-247, R-296, ('57) R-257, R-317
Fonseca, E. L.; Tracy, H. W. ('53) R-77
Forri, D. J. ('55) R-192
Ford, John L. ('54) R-133, ('56) R-224
Frank, J. A. ('54) R-23, ('57) R-136
Frank, J. A. and Perkins, A. G. ('55) R-169
French, Donald E. ('56) R-261
Frey, Ralph W. ('54) R-140, ('56) R-195
Frick, Charles ('55) R-53
Friel, Francis S. ('55) R-133, R-241
Fuhrman, Ralph E. ('56) R-114
Fulkman, John A. ('57) R-116

G

Glace, I. M. (See Krum, H. J.)
Gordon, W. F. ('56) R-29
Gotthard, Charles J. ('56) R-166
Griffin, A. E. ('54) R-132, ('56) R-98, ('57) R-115
Grune, Werner N. ('56) R-283
Gullans, Oscar ('57) R-65

H

Hamm, H. W. ('57) R-169
Hanes, G. C.; Nester, N. W., and ('54) R-276
Hardenbergh, W. A. ('55) R-263
Haseltine, T. R. ('53) R-179, ('54) R-211, ('55) R-308, ('56) R-271
Hay, Harold R. ('53) R-107
Hazlett, M. O. ('57) R-176
Head, E. Wylie ('56) R-78
Henke, R. W. ('57) R-87
Hennings, J. P. ('57) R-359
Hess, Seth G. ('53) R-208, ('55) R-227
Heukelekian, H; McMenamin, C. B. and Rand, M. C. ('54) R-224, ('56) R-267
Higgins, Wm. H. ('54) R-197, ('56) R-343
Hirsh, A. A. ('55) R-89, R-153, ('56) R-154, ('57) R-239
Hite, Howard O. ('55) R-67
Hoak, Richard D. ('54) R-177, ('55) R-315
Honwaker, L. R. and Monack, M. L. ('54) R-173
Hopkins, G. J. and Neel, J. K. ('57) R-269
Hopkins, E. S. ('57) R-91
Howson, Louis R. ('54) R-18, ('56) R-21, ('57) R-15
Hudson, W. D. ('55) R-159
Hunter, Homer A. ('53) R-21

J

Jackson, J. O. ('53) R-76, ('57) R-129
Jacobs, J. R. ('53) R-269
Jaffee, T. ('56) R-305, ('57) R-95
Jewell, H. Wm. ('55) R-332
Johnson, D. ('57) R-133
Jones, D. W. ('57) R-216

K

Karassik, Igor J. (See Carter, Roy)
Kass, N. I. and Lino, F. H. A. ('57) R-309
Keefer, C. E. ('53) R-177
King, Arthur C. ('53) R-66
Knapp, Lloyd D. ('55) R-237
Knowlton, Kenneth, F. ('56) R-219
Krum, H. J. and Glace, I. M. ('54) R-105

L

LaDue, Wendell R. ('54) R-20, ('56) R-27, ('57) R-25
Lamb III, James C.; Eliasson, Rolf, and ('56) R-99
Langford, L. L. ('57) R-296
Langworthy, V. W. ('56) R-43, R-197, ('57) R-78, R-205, R-291
Larson, T. E. ('53) R-97, ('55) R-47
Lathrop, Thomas R. ('56) R-183
Lawler, Conrad E. ('56) R-189
Leonard, Roy O. ('56) R-172
Leveque, R. J. ('55) R-91

AUTHOR INDEX-REFERENCE AND DATA SECTION—1953 through 1957

Lindsey, R. W.; Soscia, B. L. and ('57) R-54
Linn, G. L. E. ('56) R-121
Linn, F. H. A; Kass, N. I. and ('57) R-389
Linsley, S. E.; Mick, K. L. and ('57) R-313
Lohmeyer, George T. ('57) R-23
Lordley, H. E. ('54) R-134, ('57) R-72,
Louis, Leo ('57) R-83
Lunt, Herbert ('55) R-304

M

McClenahan, W. T. ('56) R-345
McDonald, John D. ('53) R-139
McMenamin, C. B. (See Heuhelekian, H.)
MacCrea, J. M. ('54) R-204
Manahan, G. T. ('57) R-161
Manor, P. H. ('57) R-166
Martin, George ('56) R-330
Martin, R. G ('54) R-195, ('56) R-341, ('57) R-347
Matheson, D. H. ('54) R-137, ('55) R-115, ('56) R-192
Mathews, C. K. ('55) R-32
Meeker, H. J. ('57) R-29
Meginnis, C. E. ('57) R-235
Mellen, Arthur F. ('55) R-216
Mick, Kerwin L. ('55) R-127
Mick, K. L. and Linsley, S. E. ('57) R-313
Miller, Frank H. ('55) R-245, ('56) R-196
Miller, H. J. ('55) R-312
Miller, R. A. ('56) R-49
Miramontes, Frank C. ('55) R-49
Mitchell, Robie L. ('54) R-184
Mohlman, F. W. ('55) R-261
Monach, M. L.; Howmaker, L. H. and ('54) R-173
Monie, W. D. ('57) R-198
Montgomery, James M. ('54) R-65, ('56) R-62
Moore, Edward W. ('53) R-197
Moore, E. W.; Sears, W. H. and Rubin, L. ('53) R-102
Morgan, James M. and Thomson, James F. ('55) R-293
Mueller, P. K. and Rand, M. C. ('54) R-208
Murdock, Jr., John H. ('53) R-18, ('55) R-34

N

Neale, Alfred T. and Eldridge, E. F. ('56) R-117
Neel, J. K.; Hopkins, G. J. and ('57) R-269
Nester, N. W. and Hanes, G. C. ('54) R-276
Niemeyer, Howard W. ('53) R-93, ('55) R-187
Niles, A. H. ('54) R-228
Nordell, Eskel ('55) R-217
Norris, Alfred O. ('54) R-77
North, Ernest C.; Fitzgerald, R. W. and ('55) R-25
Nulty, Timothy D. ('56) R-74

P

Palmer, Fred C. ('55) R-329
Parker, Dora H. ('56) R-24
Paul, Leslie ('57) R-145
Perkins, A. G.; Frank, J. A. and ('55) R-169
Pomeroy, R. D. ('57) R-249
Poole, B. A. ('57) R-244
Post, Nicholas ('57) R-337
Potthoff, E. O.; Boggis, M. C. and ('57) R-38
Powers, Edmond C. ('57) R-231

R

Rand, M. C. (See Heuhelekian, H.) and Mueller, P. K.
Rawn, A M ('54) R-223
Rawn, A M and Bowerman, F. R. ('56) R-169
Rawn, A M; Bowerman, F. R. and Stone, Ralph ('54) R-219
Reid, G. W. ('56) R-337
Riddle, R. B. ('55) R-46
Riepe, G. E. ('55) R-77
Rockcharlie, B. F. ('55) R-289
Roe, Frank C. ('57) R-281
Root, D. A. and Camp, T. R. ('56) R-35
Rosapepe, Jo S. ('56) R-23
Rubin, L. (See Moore, E. W.)
Ruehl, E. H. ('54) R-131
Rumble, F. H. ('57) R-100
Ryon, Henry ('54) R-199

S

Sampson, Geo. A. ('56) R-157
Sanders, F. A. ('55) R-125
Saunders, D. J. ('54) R-125, ('56) R-209
Schaphorst, W. F. ('55) R-320, R-321, R-338, ('56) R-263
Schmid, Geo. G. ('57) R-122
Scovill, J. R. ('54) R-207
Sears, W. H. (See Moore, E. W.)
Shaw, Robt. A. ('57) R-13
Shedden, W. L. ('56) R-309
Shelton, M. J. ('57) R-19
Sigworth, E. A. ('53) R-123
Smith, Alden ('55) R-323
Smith, Ed. J. ('54) R-206
Smith, M. C. ('54) R-69, ('55) R-57
Smolenski, Alex. ('57) R-183
Sommer, F. L. ('56) R-320
Soscia, B. L. and Lindsey, R. W. ('57) R-54
Sterling, C. I. ('57) R-18
Stone, Ralph (See Rawn, A M)
Stowell, E. R. ('57) R-90
Strvicher, Lee ('54) R-73, ('56) R-204
Strudgeon, George ('56) R-233
Symonds, Allen M. ('56) R-161
Symons, George E. ('55) R-13, ('56) R-185, ('57) R-46
Symons, George E.; Enslow, L. H. ('56) R-17
Symons, Geo. E.; Symons, J. M. and ('57) R-365
Symons, James M. ('55) R-230
Symons, J. M. and Symons, Geo. E. ('57) R-365

T

Tarrant, J. ('53) R-210, ('55) R-355, R-356
Taylor, D. M. ('57) R-342
Taylor, D. R. ('53) R-83, ('54) R-79, ('56) R-136
Taylor, T. H. M. ('56) R-149
Tempest, Wm. F. ('55) R-20
Thayer, P. M. ('57) R-367
Thomson, James F. (See Morgan, James M.)
Thoresen, John C. ('54) R-55
Tracy, Harry W. and Fonseca, Edw. L. ('53) R-77
Tschida, E. A. ('57) R-106

U

Urban, Robt. C. ('55) R-313

V

Van Kleeck, LeRoy W. ('53) R-203
Ventch, N. T. ('56) R-125

W

Wagner, C. L.; Abrams, A. and ('57) R-226
Weir, F. M. ('57) R-213
Weir, Paul ('57) R-173
Wells, C. Kenyon ('54) R-33
Weston, Robert Spurr ('54) R-141
Wiest, Gordon J. ('53) R-206
Wilkenfeld, Jerome ('55) R-122
Wilkinson, J. B. ('53) R-89
Wilson, P. S. ('54) R-83
Wisely, W. H. ('53) R-133
Wraight, F. D. ('57) R-333
Wulman, Abel ('57) R-10

Index TO ADVERTISERS

Total pages this issue 430

Manufacturers' Catalog and Bulletin Listing see p. R-371
For Manufacturers' Directory and Products see p. R-383

A

Airkem, Inc. R-336
Alabama Pipe Co. R-134-135
Allis Chalmers 4 page insert between R-32-33
American Vitrified Products Co. R-356
American Well Works R-288
Amercoat Corp. R-248
Anthracite Equipment Corp. R-189

B

Bailey Meter Company R-63
Beaumont Birch Co. R-323
Bethlehem Steel Company R-138-139
B-I-F- Industries, Inc. R-58-59
Borden Metal Products Co. R-354
Builders-Providence, Inc. R-58-59
Byron Jackson Co. R-34

C

Chain Belt Company R-262
Chicago Bridge & Iron Company R-124-125
Chicago Pump Company
R-36-264-265-266-274-284-306-307
Clarksville Fdry. & Mach. Wks. R-172
Clow, Jas. B. (Iowa Valve Co.) R-156
Cole Manufacturing Co., R. D. R-120
Columbia Southern Chemical Co. R-70
Combustion Engineering, Inc. R-318-319
Cook Well Strainer Co. R-114

D

Dorr-Oliver Inc.
4 page insert between R-240-241

F

Fischer & Porter Co. R-64
Foster Engineering Co. R-50-51

G

General Chemical Div. Allied Chemical & Dye Corp. R-80
General Filter Co. R-190
Golden Anderson Specialty Valve Co. R-126
Graver Tank Mfg. Co.
2 page insert between R-128-129
Graver Water Conditioning Co. R-82-340
2 page insert between R-128-129

H

Hardinge Company, Inc. R-260

I

Infilco, Inc. R-256
Ingalls Iron Works Co. R-305
International Minerals & Chemical Corp. R-234
Iowa Valve Co. R-156

J

Jeffrey Manufacturing Company, The R-112
Jones Co., John Wiley R-204
Johns-Manville R-142-143

K

Komline-Sanderson Engineering Corp.
16 page insert between R-312-313

L

Link-Belt Company R-242-243
Ludlow-Rensselaer Valve Mfg. Co., The R-148-149

M

M & H Valve Fittings Company R-152
Millipore Filter Corp. R-102
Morse Boulger Destruction Co. R-324
Multiplex Manufacturing Co. R-158

N

Nalco Corp. R-278
National Clay Pipe Manufacturers, Inc. R-252
National Power Rodding Corp. R-255
Neptune Meter Co. R-174-175
Nichols Engr. & Res. Corp. R-326

O

Olin Mathieson Chemical Co. R-206
Omega Machine Co. R-58-59

P

Pacific Flush Tank Co. R-300-301
Penn Salt Mfg. (West Div.) R-208
Permutit Company R-220-221
Phipps & Bird, Inc. R-98
Pratt, Henry, Co. R-171
Presstite Engr. Co. R-251
Pressure Concrete Co. R-348-349
Proportioneers, Inc. R-58-59

R

Rensselaer Valve Co. R-149
Roberts Filter Mfg. Co. R-186

S

Schramm, Inc. R-230
Simplex Valve & Meter Co. R-49
Smith & Loveless, Inc. R-346
Smith, S. Morgan R-144
Smith Mfg. Co., A. P. R-165

T

Tennessee Corporation R-76

U

U. S. Pipe & Foundry Co. R-141

W

Walker Process Equip. Inc. R-247
Wallace & Tiernan, Inc. R-212-290
Washington Aluminum Co. R-353
Water Seals, Inc. R-350
Western Machinery Co. R-294
White Diesel Eng. Div. R-308
Worthington Corp. R-30-258

Y

Yeomans Brothers Co. R-273

Water & Sewage Works

Index, Vol. 104, January-December, 1957

NUMBER	PAGES
January	1— 48
February	49— 88
March	89—138
April	139—178
May	179—230
June	231—278

NOTE!

1—For Index to Reference and Data Material, see June 30, 1957 Issue, Page R-390.

2—Reports on conventions are listed only under "Conventions and Meetings."

3—See "Geographical Locations" for references to cities, towns and countries.

4—Page numbers followed by A are in Advt. Section.

NUMBER	PAGES
July	279—326
August	327—376
September	377—430
October	431—478
November	479—522
December	523—562

A

Activated Silica Preparation..... 20
Activated Sludge:
  Biosorption 23
  Frothing Control 172
  Luton, England—Practice 214
Air in Sewage Treatment..... 84
Alden Stilson and Assoc.—new office.....373
Analytical Methods:
  Alkalinity Measurements in Water....509
  Concentration of Impurities in Water..508
  Membrane Filter Procedure.....385
  Photometric Determination of Color and Turbidity in Water.....492
Annual Reports:
  Indianapolis Water Co.....Aug. 98A
  N. Eng. Pol. Control Comm.....Aug. 98A
  Reports Received .....Sept. 120A
  Received .....Aug. 96A
  Review of 1956—Water Supply..... 1
  Sewage and Industrial Wastes, 1956... 49
Appointments and Elections:
  Adkins, William W., Asst. Supt. of Water, Greenville, S. C..... 18
  Anson, E. H.—Pres. A.I.C.E.....Mar. 110A
  ASCE, New Officers.....487
  Bacon, Vinton, Exec. Secy., N. W. Pulp and Paper Assoc..... 78
  Bassett, Charles—Dir., BDSA Water and Sewage Div.....Sept. 120A
  Bowe, Albertson and Assoc.—new partners 178
  Brush, W. W.—Treas. Em., AWWA.... 98
  Corddry, W. H.—Pres. Gannett, Fleming, Corddry and Carpenter....379
  Curties, W. D.—Mayor and Plant Operator 447
  Dunstan, G. H., Secy., Pacific N. W., S.I.W.A. .....Jan. 88A
  Dyer, Garvin H., Pres. of NSPE.....417
  Eldridge, Edward F.—USPHS.....427
  Finch, L. S.—V.P., AWWA..... 98
  Geger, Dr. J. C.—Dept. Hd., Johns Hopkins 219
  Glenn, Thos. R., Jr. Asst. Ch., I.S.C....104
  Gotaas, H. B.—Dean of Engineering, Northwestern U. 67
  Harris, Robt.—PHS, Chief of Fed. Assistance—Sew. Wks.....204
  Heinz, Fred C., to WPCAB.....135
  Heukelekian, Dr. H., Chairman, Dept. of Sanitation, Rutgers U..... 82
  Howson, L. R.—Nominated Pres., A.S.C.E. 379
  Hudson, Herbert E.—Partner, Hazen and Sawyer 353
  Hunt, Hal W.—Exec. Secy., "C. E."...270
  Kavanagh, J. Philip—Pres. of Virginia I.W.&S.W. Assn. 385
  Mathison, J. J.—Green Eng. Co.....220
  McCartt, L. E.—Supt. San. Dist. No. 1, Covington, Ky. 365
  Merryfield, F.—Pres., AWWA..... 98
  Moore, Allen—Chairman ACS Div. of Water, Sewage and San. Chem.....119
  Morton, Roy J., Pres.-elect A.P.H.A.... 82
  Nave, M.—training in U. S.....204
  Officers, Eng. and San. Sect., A.P.H.A..164
  Orchard, W. J.—Treas., AWWA..... 98
  Schlenz, Harry—Pres. W.&S.W. Mfgrs. Assoc. .....Jan. 106A
  Smith, Clinton, Genl. Mgr. Birmingham W. W.....417
  Smith, W. Harry—Staff, C.I.P. Research Assn. .....Jan. 109A
  Swab, Bernal H., joins O'Brien & Gere.255
  To WPCAB 131
  Wahl, A. J., Pres., Pacific N. W., S.I.W.A. .....Jan. 88A
  Wilkens, H.—joins Preuss, Nichols and Turner 220
Appropriation, Pollution Abatement Voted by Senate.....417
Awards and Honors:
  Baylis, John R.....230
  Capehart, Senator Homer.....538
  Fla. Water and Sewage Plant Operators 490
  Johnson, Jack 307
  Hoeltzner, N. J.—50th Anniv.....427
  Imhoff, Karl—Hon. Mem., ASCE.....384
  Morse, Howard S.—Hon. Mem. ASCE..384
  Papesch, George 307
  Pearse, Langdon—Memorialized 430
  White, Guy H.—Plant named for.....521
  Wolman, Abel—at Drexel I. T.....365
AWWA:
  AWWA, N. E. Sect., Officers....May 114A
  77th Convention Report.....240
  Convention, 77th—Part 2.....287
  Annual Convention, Part 3.....335
  Remarks on by Amsbary.....529
  Secy. Jordan addresses APWA.....511

B

Black & Veatch Move..... 37
Books, 100 Best—Water & Sewage.....160
Book Reviews:
  Booklets & Pamphlets Available..Oct. 106A
  Disposal of Sewage and Other Wastes, Imhoff et al.....Apr. 88A
  Military Water Supply and Sanitation Symposium 277
  Register of Dams in the U. S.....373
  Sewerage Planning .....Apr. 88A
  4th So. Conf., Municipal and Ind. Wastes 230
  Swimming Pools and Other Bathing Places—10th Ed. .....Aug. 98A

C

Centrifugal Pumps:
  Can't Read 254
Chemicals:
  Activated Silica Preparation..... 20
  Calgon, Pipe Cleaning.....440
  Fluoridation 348
  Indicators, Hydrogen Sulphide.....261
  Lime-Soda—Water Softening—Part 2..496
Clarifier:
  Clarifier—Discussion 163
  Clarifier, Susp. Solids..... 99

Concrete:
Concrete Pipe Specification Changes... 37
Concrete Sewer Pipe Protection.....145
Pipe, Film on.....247
Construction:
Alexandria, Va.—Sewage Works.....165
Aruba, Curacao—Water Plant.....239
Caracas, Venezuela—Water Works....207
Cast Iron Pipe Socketing.....213
Coral Gables, Fla.—Sewage Works....139
Cumberland, Md.—Water Supply Line.159
Dayton, Iowa—Sewage Treatment.....136
El Centro, Calif.—New Water Plant...293
Grand Rapids, Mich.—Sewage Works..136
Indianapolis, Ind.—New Operations Center 179
Louisville, Ky.—Sewage Facilities.....223
Paper Mill Water Treatment Johnsonburgh, Pa. 120
Petersburg, Va.—Sewage Treatment Plant 460
Port Clinton, O.—Sewage Treatment...123
Raritan Valley, N. J.—Subaqueous Outfall 261
Sewers Take to the Air.....83
St. Louis County Filtration Plant..... 89
Sullivan, Mo.—Water Pump Sta.....162
Timber Reservoir Cover, Beaverton, Ore. 385
Waterville, Wash.—Sewage Lagoon....424
West View, Pa.—Water Supply, Aug. 101A
Windsor, England—Sewage Works....132
Consultants, Directory Available....Oct. 106A
Consultant Services Sought.....511
Conventions and Meetings:
ACE, Miami, Fla.....May 112A
APWA, Speech at Meeting of.....511
ASCE, Spring, Buffalo, N. Y.....219
AWWA, 77th Convention—Part 2.....287
AWWA, Annual Convention—Part 3...335
AWWA Exhibitors .....122, Apr. 106A
AWWA, N. E. Sect., Officers....May 114A
AWWA, 77th Convention Report.....240
Central States Sew. & Ind. Wastes Assn. 423
Duke U., 6th So. Mun. & Ind. Wastes Conf. 178
FSIWA, 29th Meeting at Los Angeles —Part 2 82
FSIWA, 30th Meeting Program.....421
FSIWA, 30th Annual Meeting.....554
FS&IWA Convention Exhibitors.....447
Hyd. & San. Div.—Philadelphia Sect., ASCE 334
Manhattan College—San. Eng.....264
Manhattan College—Waste Treat.....319
NEWWA, 75th Meeting.....531
NEWWA, March Meeting.....252
Nuclear Congress, 1957.....119
Ohio Sew. & Ind. Waste Conf.....418
Penna., Clean Streams.....May 114A
Penna. Operators—Date Set.....545
pH Measurement Symposium.....230
Purdue Ind. Was. Conf. Proceedings Available 411
Sewage Treat. Plant Design.....May 112A
Switzerland—Water & Waste Treat. .....Aug. 98A
Symposium Planned, Saline Water Conversion .....Oct. 109A
U. of Fla., 10th San. Eng. Conf.....178
U. of Kansas—7th San. Eng. Conf. .....Mar. 110A
Water Resources Council.....495
Corrections:
To pp 515, 518, 520 and 521—Concentric Orifice Diameters—1956. ... 18
Photo, Page 67.....119
Page 79—Chart 198, 455
Pages 133-136 204
Page 152 .....July 106A
To Pages 79 and 198.....334, 373
To Pages 309-10.....502
Corrosion:
Contributing Factors, Protective Coatings, Materials 308
Effective Control, Equipment.....491
More Methods of Control.....356
What it is; What it does.....210
Costs:
Alexandria, Va.—Sewage Works.....165
A Water Meter is a Dollar Machine....114
Development, Water Supply.....110
Meter Repair and Replacement.....114
Sewage Treatment, Luton, England...214
Sewage Solids Incineration.....479
Sewer Cleaning, Outside Forces.....320
Course, San. Eng., Cincinnati U.....255

D

Data, How to Collect Store and Use..... 42
Dear Bill Letter:
A Big Problem Ahead.....109
Now! What About Air Conditioning...391
About Dog Days—And Such.....355
Sometimes the Customer is Right!..... 19
Stop These Efficiency Stealers.....522
Deaths:
Berrigan, Tom A.....Jan. 90A
Enslow, Linn H.....562
Gifft, H. M..... 67
Goehring, Edwin C.....423
Haskins, C. A.....Feb. 92A
Norman, Earl .....Sept. 118A
Platt, Wm. McK.....July 106A
Richardson, Charles G.....113
Sherwood, Wm. C.....368
Design:
Aids in Pump Station.....487
Automatic Control, Pumping Stations.540
Butterfly Valves, How to Select —Part 1 412
Concentric Orifice Diameters.....448
Coral Gables, Fla.—Sewage Works....139
Dayton, Iowa—Sewage Treatment.....139
El Centro, Calif.—New Water Plant...293
Engineered Expansion Program, Water Supply, Atlanta, Ga..... 62
Flow in Rectangular Channels.....455
Grit Chamber 271
Mesophilic Anaerobic Digestion.....546
Port Clinton, O.—Sewage Treatment...123
Sewage Disposal Lagoon.....424
Submersible Pump Applications, Booster Pumping 431
Water Consumption, Factors Influencing 199
Windsor, England—Sewage Works.....132
Detergents:
Developments in 1956:
Developments in 1956 Water Supply... 1
Sewage and Industrial Wastes, 1956... 49
Digestion, Sludge—See Sludge Digestion
Disinfection:
Distribution System:
Automatic Control, Pumping Stations.540
Expanding and Improving.....256
How to Maintain Pipe Coefficient "C"..440
Operation and Maintenance..... 68
Plastic Pipe for Water Service.....452
Remote Control and Telemetering System 506
Simplicity in Control Systems.....536
Submersible Pump Applications.....431
Water Hammer, Shock Pressure.....361

E

Editorials:
Linn Harrison Enslow.....562
Equipment and Materials:
Actuator, Valve—Conoflow Corp..Apr. 94A
Aeration, Gas Disperser.....Jan. 94A
A-Frame, Portable—B. E. Wallace Products Co. .....Mar. 115A
Alarm Device—Inflico Inc.....May 126A
Antifoams—Hodag Chemical Corp. .....Sept. 124A
Applicator, Pipe Lining—Pitt. Coke and Chemical Co.....July 109A
Backhoe—Shawnee Mfg. Co.....May 136A
Backhoe—Shawnee Mfg. Co.....Aug. 102A
Backhoe—Young Spring and Wire Corp. .....Apr. 97A
By-Pass—Brooks Rotometer Co,. .....Mar. 112A
Carbonation, Water—Walker Process Process Equip. Inc.....Aug. 104A
Centrifugal Pumps—Gould Pumps, Inc. .....Jan. 98A
Chlorinator—Wallace & Tiernan Inc. .....Oct. 116A
Chuck, Pipe—Oster Mfg. Co.....July 108A
Clamp—M. B. Skinner Co.....July 108A
Clamp, Pipe—Dresser Mfg. Div..July 112A
Coating—Allied Porcenell, Inc...July 107A
Coating, Metal—Guardian Chem. Prod. Co. .....Oct. 114A
Coating—Natl. Coating Products Inc. .....Mar. 113A
Coatings—Wilbur & Williams Co. .....July 110A
Colorimetric Analyzer—Milton Roy Co. .....Nov. 98A
Comminutor—Worthington Corp. .....May 122A
Composting Machine—Eastern Depuration Works .....Oct. 112A
Compressors—Allis-Chalmers ...Mar. 114A
Concrete Boring Tool—J. F. Hamlin Co., Inc. .....May 120A
Control System—Robertson-Fulton Controls Co. .....Mar. 116A
Converter—Fischer & Porter.....Apr. 96A
Corrosion Protection—Tropical Paint Co. .....July 110A
Coupler, Pipe—Food Machinery and Chem. Corp.....Feb. 98A
Coupling, Pipe—Keasby & Mattison Co. .....July 108A
Crane, Truck—Stanco Mfgrs. and Sales, Inc. .....Dec. 88A
Curb Box—Opelika Foundry Co. .....Oct. 110A
Curb Lock—Bremer Brease, Inc. .....July 108A
Cutter, Pipe—Beaver Pipe Tools Inc. .....Aug. 106A
Cutter Wheel—Beaver Pipe Tools, Inc. .....Sept. 124A
Desanding, Well Water—Dorr-Oliver Inc. .....Sept. 125A
Diaphragm for Valves—Hills-McCanna Co. .....Nov. 99A
Diaphragm Shields—Garlock Packing Co. .....Sept. 124A
Diffusers—PFT Co. .....May 116A
Ditcher Controls—Gar Wood Industries, Inc. .....June 114A
Ditcher—Gar Wood Industries Inc. .....July 108A
D. O. Analyzer—Dorber Co.....Feb. 100A
Drive System—U. S. Electrical Motors Inc. .....Dec. 94A
Earth Borer—Hydrauger Corp...Apr. 92A
Effluent Sampler—Phipps & Bird, Inc. .....Apr. 92A
Evaporation Reducer—American Alcolac Corp. .....Nov. 101A
Expansion Joints—Zallea Bros...July 112A
Filter, Automatic—Permutit Co. .....July 108A
Fish Toxicant—S. B. Penick & Co. .....Apr. 98A
Filter Aids—Johns-Manville Corp. .....Oct. 111A
Filter Media—Robert Enterprises .....Oct. 116A
Filter, Wells—Filtros, Inc.....Aug. 102A
Flange, Taper Face—Tube Turns .....Mar. 111A
Flotation Treatment, Oily Wastes Sveen-Pedersen Sales Corp.....Feb. 94A
Flow Nozzle—Burgess-Manning Co. .....Nov. 98A
Fluoridating with Fluorspar....Mar. 109A

Gage Glass Cleaner—Jerguson Gage and Valve Co. ..... Aug. 109A
Gages, Inclined—Jerguson Gage and Valve Co. ..... Feb. 99A
Gas Chromatograph—Beckman Instruments, Inc. ..... Jan. 98A
Gas Detector—Johnson-Williams, Inc. ..... Sept. 122A
Gear Unit—U. S. Electrical Motors, Inc. ..... July 111A
Grating—Globe Co. ..... Jan. 94A
Grating, Stair Treads—Aluminum Co. of America ..... June 115A
Hammer Drill—Demo-Haines Tool Corp. ..... Feb. 98A
Handwheel Operator—Conoflow Corp. ..... Mar. 112A
Hoe Boom—Insley Mfg. Corp. .. June 112A
Hydrostatic Tester—Farris Engineering Corp. ..... Oct. 116A
Indicator—Dickson Co. ..... May 128A
Indicator, Drum-Type—Bristol Co. ..... May 118A
Instrument Air Dryer—King Engineering Corp. ..... Apr. 90A
Joint Ring Protection—American-Marietta Co. ..... June 108A
Labs, Portable—Fisher Scientific Co. ..... June 111A
Lift Jacks and Platforms—Bond Foundry and Machine Co. .... Nov. 100A
Lining—Dow Chemical ..... Apr. 92A
Lining, Tank—Du Pont Co. .... Mar. 112A
Measuring Wheel—Rolatape Co. . May 122A
Meter Setting Equip.—Hays Mfg. Co. ..... Mar. 115A
Millivoltmeter—Fisher Research Laboratory, Inc. ..... Feb. 96A
Monitoring System, Robot—Minneapolis-Honeywell ..... Jan. 92A
Motor, Pump, Variable—Vanton Pump and Equip. Corp. ..... Aug. 104A
Motor—U. S. Electric Motors, Inc. ..... Apr. 94A
Motor—U. S. Electric Motors, Inc. ..... Dec. 93A
Motor Relay—Electrical Service Co. ..... June 113A
Motors—Electric Machinery Mfg. Co. ..... June 110A
Motor, Vertical—Allis-Chalmers Mfg. Co. ..... Nov. 102A
Oil Filter—Norse Electric Mfg. Co. ..... Dec. 90A
O Rings and Brass Parts—Crane Co. ..... May 118A
Oxidation-Reduction Cell—Fischer & Porter Co. ..... Dec. 93A
Ozonator—Invex Inc. ..... Sept. 126A
Paint, Anti-Rust—Chem. Industrial Co. ..... June 114A
Paint, Heat Resistant—Chem. Industrial Co. ..... Sept. 126A
Parshall Flume Unit—Burgess-Manning Co. ..... July 110A
pH Meter—Beckman Instruments, Inc. ..... Mar. 114A
pH Recorder—Bristol Co. ..... Feb. 96A
Pipe and Bolt Machine—Beaver Pipe Tools, Inc. ..... Oct. 115A
Pipe, Asbestos-Cement—Keasbey & Mattison Co. ..... Mar. 117A
Pipe, Clay—Gladding, McBean & Co. ..... Sept. 126A
Pipe Cleaner, Chemical—FX-Lab Co. ..... Jan. 98A
Pipe Coupling—B. F. Goodrich Industrial Prod. Co. ..... Dec. 92A
Pipe Coupling Machine—Davis Mfg. Co. ..... Apr. 97A
Pipe Cutter—Ridge Tool Co. .... May 126A
Pipe Cutter—Wallace Supplies Mfg. Co. ..... Oct. 112A
Pipe Cutter—Wallace Supplies Mfg. Co. ..... Nov. 99A
Pipe Detector—Oitron ..... July 112A
Pipe Fittings—Orangeburg Mfg. Co., Inc. ..... Dec. 90A
Pipe Joint, C. I.—Clow ..... May 118A
Pipe Marking System—W. H. Brady Co. ..... May 126A
Pipe, Plastic—Evans Pipe Co. . Sept. 125A
Pipe, Plastic—Orangeburg Mfg. Co., Inc. ..... Aug. 102A
Pipe, Plastic—U. S. Rubber Co. . Oct. 117A
Pipe, Plastic—Yardley Plastics Co. ..... Oct. 114A
Pipe Thawer—Trindl Products, Ltd. ..... May 132A
Pipe Threader—Ridge Tool .... July 107A
Pipe Union—Walworth Co. .... July 107A
Pivot Headers, Aeration—Walker Process Equip. Co. ..... July 111A
Plastic—Haveg Industries, Inc. . May 128A
Plastic Pipe—U. S. Rubber Co. . . July 111A
Plug, Pipe—Vanderlans & Sons . Aug. 104A
Portable Water Lab.—Salem-Brosius, Inc. ..... Mar. 113A
Positioner, Valve Control—Conoflow Corp. ..... May 122A
Potentiometer, Recording—Bristol Co. ..... Feb. 99A
Potentiometer, Recording—Westronics, Inc. ..... Oct. 111A
Power Unit—U. S. Electrical Motors, Inc. ..... Mar. 116A June 109A
Prime Coating—Constad Lab. .. Apr. 98A
Protective Coating—Smith & Loveless Inc. ..... Jan. 96A
Pumps, Centrifugal—Aurora Pump ..... Sept. 124A
Pump, Centrifugal—Homelite . . Mar. 111A
Pumps, Centrifugal—Worthington ..... Apr. 90A
Pump, Diaphragm—Denver Equip. Co. ..... Sept. 122A
Pump Diaphragm—Hills-McCanna Co. ..... Nov. 102A
Pump, Diaphragm—Layton Co. . June 114A
Pump, Diaphragm—Ralph B. Carter Co. ..... June 110A
Pump Mounting—Rice Pump and Machine Co. ..... Oct. 117A
Pumps, Air Lift—Walker Process Equip. Inc. ..... Aug. 109A
Pumps, Heavy Duty—Gould Pumps, Inc. ..... Aug. 105A
Pumps, Sump—C. H. Wheeler Mfg. Co. ..... Nov. 96A
Pump, Sump—Schramm Inc. .. June 108A
Pump, Sump—Schramm Inc. .. Aug. 106A
Pumps, Warranty-Exchange—Kenco Pump Div. ..... May 130A
Rain Gage—M. C. Stewart ..... July 107A
Recorder-Totalizer—Standard Instrument Corp. ..... June 112A
Remote Indicator-Controller—Builders-Providence, Inc. .... June 114A
Repair Kit—Devcon Corp. ..... Aug. 107A
Ring Balance Meter—Hagan Chemicals and Controls ..... Sept. 127A
Root Destroyer—Camp Chemical Co., Inc. ..... June 113A
Rooter—Roto Rooter Corp. ..... June 113A
Rotameter Floats—Brooks Rotameter Co. ..... Dec. 95A
Rust Solvent—Radiator Specialty Co. ..... Aug. 105A
Septic Tanks—Vega Industries, Inc. ..... Aug. 104A
Sewage Ejector—Komline-Sanderson Engineering Corp. ..... Dec. 88A
Sewage Ejector—Smith & Loveless ..... Mar. 117A
Sewage Pumping Station, Package—New England Pump & Mach. . Feb. 100A
Sewer Cleaner—Flexible Inc. .. Nov. 101A
Shaft Terminals—Stow Mfg. Co. ..... June 108A
Slide Rule—Arthur F. Smith Co. ..... Aug. 106A
Sludge Dryers—Std. Steel Corp. . Sept. 125A
Steam Cleaner—Clayton Mfg. Co. ..... Sept. 125A
Sump Pump—Atlas Copco Eastern, Inc. ..... Apr. 97A
Tank Selector—Worthington . . . June 108A
Telemeter—Moore Assoc. ..... Oct. 112A
Tenon Tool—Spring Load Mfg. Corp. ..... Apr. 96A
Tool Kits, Lab.—Burrell Corp. . . . Feb. 96A
Transistor Transmission—Builders-Providence, Inc. ..... Nov. 96A
Transmitter—Brooks Rotometer . . Feb. 98A
Transmitter, Pressure—Foxboro Co. ..... May 116A
Transmitter—Republic Flow Meter ..... Apr. 96A
Trencher—Challenge Mfgr. Co. . . May 122A
Tripod—B. E. Wallace Co. ..... Apr. 97A
Tube Threader—J. A. Sexauer Mfg. Co. ..... Oct. 115A
Tubing, Chlorinators—Wallace & Tiernan, Inc. ..... Nov. 99A
Tubing Cutter—Erie Tool Works ..... May 132A
Valve Actuator—Robertshaw Fulton Controls Co. ..... June 113A
Valve, Backcheck—Hercules Plastics Corp. ..... Jan. 92A
Valve, Ball—ACF Industries, Inc. ..... Dec. 94A
Valves, Ball—Jamesbury Corp. . July 107A
Valve Box Locator—Agua Survey and Inst. Co. ..... Feb. 99A
Valve, Butterfly—Darling Valve Mfg. Co. ..... Nov. 100A
Valves, Butterfly—S. P. Kinney Engineers, Inc. ..... Oct. 116A
Valve, Check, Plastic—Walworth Co. ..... Oct. 117A
Valve Control—Sparton Corp. .... Dec. 92A
Valves, Control System—A. W. Cash Co. ..... Dec. 94A
Valve, Corrosion Resistant—Walworth Co. ..... May 124A
Valves, Diaphragm—Hills-McCanna Co. ..... Dec. 93A
Valves, Gate—Crane Co. ..... May 120A
Valve, Multiport—Hungerford & Terry, Inc. ..... June 110A
Valves, Plug, Automation—Pantex Mfg. Co. ..... July 110A
Valves, Plug, Core Facing—De Zurik Corp. ..... Feb. 96A
Valve, Plug—Rockwell Mfg. Co. . Aug. 103A
Valve, PVC Check—Techno Corp. ..... Jan. 103A
Valves, Relief and Back Pressure—Milton Roy Co. ..... Jan. 92A
Variable Speed Drive—U. S. Electrical Motors, Inc. ..... May 124A
Venturi Tubes—Vector Mfg. Co., Inc. ..... July 109A
Water Meter—Rockwell Mfg. Co. ..... July 110A
Water Vendor—Illes Power Control Co. ..... July 107A
Waterstops, Plastic—Electrovert, Inc. ..... Feb. 101A
Waste Treatment Unit—Dorr-Oliver Inc. ..... June 110A
Weigh Feeder—Syntron Co. .... Apr. 98A
Expansion Program, Atlanta, Ga., Water Supply 62

F

Fable 114
Facilities Needs, San. Eng. 135
Filtration, Novel Plant 90
Flow:
- Concentric Orifice Diameters 445
- Grit Chamber Design 271
- In Rectangular Channels 453
- Magnetic Flow Meter 349

Magnetic Flow Meter, Medford, Mass..382
Rectangular Channels 79
Sewage, Parshall Flume.....366
Flocculation, Water Works:
Activated Silica Preparation..... 20
Walking-Beam Flocculators 279
Fluoridation:
Applied, Fundamentals of.....348
Chicago, Ill. 159
N. J. Sect., A.W.W.A., against...Feb. 99A
Fluoride Metabolism Facts.....491
Increase in Tenn.....Aug. 100A
Water Works Men, Stand Commended.361
Frothing Control, Act. Sludge Plants.....172
FSIWA:
FSIWA 29th Annual Meeting at Los Angeles—Part 2 32
30th Annual Meeting, Program for....421
30th Annual Meeting.....554
Exhibitors at Convention.....447

G

Geographical Locations:
Alexandria, Virginia—Sewage Treatment Plant Dedication..... 48
Alexandria, Va.—Sewage Works.....165
Atlanta, Ga. 98
Atlanta, Ga.—Expansion Program Water Supply 62
Beaverton, Ore., Timber Reservoir Cover 384
Brantford, Ontario—Walking Beam Flocculators 279
Caesarea, Israel—Water Supply.....304
Caracas, Venezuela—Water Works....207
Chicago, Ill.—Fluoridation 159
Coral Gables, Fla.—Sewage Works....139
Cumberland, Md.—Water Line.....159
Daytin, Iowa—Sewage Treatment.....130
Dunnville, Ont.—Plastic Pipe.....462
East St. Louis, Ill.—Water Supply.....390
El Centro, Calif.—New Water Plant...293
Grand Rapids, Mich.—Sewage Works..136
Genoa, Ill.—Enzymes Correct Digester Troubles 519
Gibson, Ga. 535
Hollywood, Fla.—Meter Maintenance.. 18
Indianapolis, Ind.—New Operations Center 179
Johnsonburgh, Pa.—Paper Mill Water.120
London County, Outfall Works, England 311
Los Angeles, Calif.—Conc. Sewer Pipe Protection 145
Los Angeles, Calif.—Sewer Repair.....477
Medford, Mass.—Magnetic Flow Meter.382
Nashville, Tenn.—Floating Pump House 561
Natrona, Pa.—Utility Sold.....553
New Smyrna Beach, Water Tank.....459
Oneonta, N. Y.—Water Plant Dedication 439
Peoria, Ill.—Recharge of Ground Water 488
Petersburg, Va.—Sewage Treatment Plant 460
Philadelphia, Pa.—Meter Repair..... 14
Polk, Pa.—State School.....346
Port Clinton, O.—Sewage Treatment...123
Raritan Valley, N. J.—Subaqueous Outfall 261
Reservoir, Forced Circulation.....231
Scituate, Mass.—Water Tower.....416
St. Joseph, Mo.—Sewer Repair.....474
St. Louis County Filtration Plant..... 89
Sullivan, Mo.—Water Pump Sta.....162
Utica, N. Y.—Meter Repair.....302
Vancouver, Wash.—Electrical Supervisory Controls 512
Waterville, Wash.—Sewage Lagoon....424
Winchester, Va.—Dedication of Plant..405
Graduate Course, Ill. Tech.....Sept. 118A
Graduations, First Female, Rutgers U., Dept. of San.....219
Grants:
Federal for Sew. Treat Works.....300
1st Year of Federal Aid.....472
Some States Supplementing Federal...518
USPHS 135
USPHS Research—No. 4.....206
Grit:
Grit Chamber Design.....271

H

Hydraulics:
Automatic Control, Pumping Stations..540
Concentric Orifice Diameters, Nomograph Determines 448
Flow Characteristics, Sewage Works..325
Flow in Rectangular Channels.79, 198, 455
Grit Chamber Design.....271
Magnetic Flow Meter.....380
Parshall Flume, Sewage Flow.....366
Pipe Coefficient "C", How to Maintain.440
Water Distribution Systems.....256
Water Hammer, Shock Pressures.....261
Hydrogen Sulphide, Concrete Sewer Pipe Protection 145

I

Indianapolis Water Co. Publication.....178
Industrial Wastes:
Developments, Trends and Problems, 1956 Indus. Wastes and Sewage..... 40
Effluent Problem, Britain.....428

L

Legal Notes:
Calif. Plans Legislation for 1957..... 82
How the Courts Consider Pipe Line Breaks 377
Kansas City, Mo.—Ordinance on Air Conditioner 261
Pollution Control, Test Case.....491
Water—Liability to Prop. Owners—Fire...191
Water and Sewage Works, Legal Problems 523
Water Works—New Water Use..... 96

M

Maintenance:
Ball Bearings, Rebuilt.....225
Bolts in Worn Holes.....Apr. 86A
Concrete Sewer Pipe Protection.....145
Corrosion Control, Equipment.....401
How to Pull a Tight Key.....277
Los Angeles, Calif.—Sewers.....477
Meters 305
Meters, Repair, Incentive Pay Plan for. 14
Meters, Utica, N. Y.....302
Plant, Operator's Responsibility.....344
Pipe Line "C".....440
Sewer Cleaning Costs.....320
Sewers, St. Joseph, Mo.....474
Steel Water Tanks.....153
Tanks, Water 406
Water Distribution System..... 68
Management:
Automatic Control, Pumping Stations..540
Color Coding Plant.....262
Corrosion Control, Equipment.....401
Engineered Expansion Program, Atlanta, Ga.—Water Supply..... 62
Data, How to Collect Store and Use..... 62
Development, Water Supply.....110
Electrical Supervisory Controls.....512
Importance of Metering.....529
Incentive Plan—Meter Repairs..... 14
Legal Problems, Water and Sewage Works 523
Magnetic Flow Meter, Medford, Mass...382
Meter Maintenance, Utica, N. Y.....302
Meter Repair and Replacement.....114
New Operations Center, Indianapolis, Ind. 179
Operation and Maintenance of Water Distribution Systems 68
Plant Maintenance, Operator's Responsibility 344
Problems in Operation, Small Water Works 456
Rate Making 236
Sewage Solids Incineration Costs.....479
The Magnetic Flow Meter.....380
Water Distribution Systems, Expanding and Improving.....256
Water Meters Advantageous..... 76
Watershed Protection, Reservoir Mgt. and Pollution Abatement.....502
Water Softening, Economics.....327
Water Tank Maintenance.....406
Why Operators Should Keep Good Water Plant Records..... 80
Water Works, Conservation and Public Relations 527
Membrane Filter Procedure.....385
Meters:
Determine Need—Repair and Replacement 114
Importance of Metering.....529
Magnetic Flow Meter, Medford, Mass..382
Maintenance 205
Maintenance, Utica, N. Y.....302
Meters, Repair, Incentive Pay Plan for. 14
Why Advantageous 76
The Magnetic Flow Meter.....380
Military Water Supply..... 99

N

New Operations Center, Indianapolis Water Co. 179

O

Odor Control in Sewage Treatment.....175
Ohio Sewage and Ind. Wastes Conf.....418
Operation:
Effective Corrosion Control.....401
Water Distribution Systems..... 68
Water Plant Records..... 80

P

Painting, Steel Water Tanks.....153
Personnel:
Engineer Earnings 521
Incentive Pay Plan, Meter Repair..... 14
Plant Maintenance, Operator's Responsibility 344
Suggestion Awards .....Aug. 101A
Pipe:
Cast Iron, Properly Socketing.....313
Concrete Pipe Specification Changes... 37
Concrete Sewer Pipe Protection.....145
Distribution Systems—Operations and Maintenance 68
Corrosion 210, 305, 356
Film on 247
Flexible Plastic, Standards.....307
How to Maintain "C" Coefficient.....440
Jointing Material—Sewers 128
Plastic, Booklet on.....Aug. 98A
Plastic, For Water Service.....452
Plastic, Research 119
Sewers Take to the Air..... 83
Square, Water (1773).....463
Water Line—Cumberland, Md.....159
Planning:
Automatic Control, Pumping Stations..540
El Centro, Calif.—New Water Plant....293
Engineered Expansion Program, Atlanta, Ga.—Water Supply..... 62
Expansion, East St. Louis, Ill.....390
Future, Indianapolis Water Co.....237
London County, England.....311
Louisville, Ky.—Sewage Facilities.....236
New Operations Center, Indianapolis, Ind. 179

Simplicity in Control Systems.....538
Walking-Beam Flocculators 279
Water Consumption 199
Water Distribution Systems.....256
Water Pollution Control—Territories...230
Water Supply 110
Plastic Pipe Research.....119
Progress Review, 1956, Water Supply..... 1
Public Relations:
Atlanta, Ga. .....Aug. 98A
Development, Water Supply.....110
Jamaica Water Supply Co.—Summer Use 334
Odor Control in Sewage Treatment....176
Rate Making 238
Rockwell Reports, Story of.....251
Submersible Pumps, Booster Pumping.431
Water Softening, Municipal.....327
Water Works Management and Conservation 527
What Do You Want in a Salesman....248
Pumps:
Centrifugal Pumps Can't Read.....264
Submersible, Applications in Booster Pumping 431
Purdue Pickups .....Feb. 98A, Mar. 108A, Apr. 86A, May 112A, July 106A, Aug. 96A

R

Rates:
Increasing Revenue 265
Rate Making; Water and Sewage.....238
Records:
Data, How to Collect, Store and Use... 42
Why Operators Should Keep Good Water Plant Records..... 80
Report From Abroad:
Flow Characteristics, Sewage Works Plants 325
Industrial Effluent Problem, Britain...428
London County, Outfall Works.....311
Luton, England—Sew. Treat. Works...214
Reconstructed Sewage Works, Windsor, Eng. 132
Reservoirs:
Forced Circulation 221
Timber Cover 388
Watershed Protection, Reservoir Mgt. and Pollution Abatement.....503
Retirements:
Casteel, Stephen C.....252
Skinker, Thomas J.....430
Wallace, W. M.....222
Wolman, Dr. A.....219
Rockwell Reports 251

S

Safety:
Salesman and the Water Works Engineer..249
Salesman, What Do You Want in a.....248
Sanitary Engineering:
Coagulant Aids Scrutinized by U.S.P.H.S. 518
Industry and Municipalities—Stream Pollution, Problem 505
Membrane Filter Procedure.....385
Watershed Protection, Reservoir Mgt. and Pollution Abatement.....503
Sedimentation:
Flow Characteristics, Sewage Works..325
Sewage:
Air in Treatment of..... 84
Compressed Air Applications.....514
Developments, Trends and Problems, 1956 49
Effluent Reclamation 265
Flow Characteristics, Plants.....325
Flow, Parshall Flume.....366
Grit Chamber Design.....271
Handling Dried or Incinerated Solids..479
Immediate Oxygen Demand, Digestor Liquor 374
Lagoon Disposal System.....424
Proper Sludge Digestion.....278
Sludge Digestion 38
Solids Incineration Costs.....479
Total Oxidation Treatment.....276
Sewage Treatment:
Biosorption—Activated Sludge 23
Compressed Air Applications.....514
Developments, Trends and Problems, 1956 49
Digestor Operation, "CO_2 Alarm".....362
Enzymes Correct Digestor Troubles and Eliminate Grease.....519
Handling Dried or Incinerated Solids..479
Immediate Oxygen Demand, Digestor Liquor 374
Industrial Effluent Problem, Britain...428
Luton, England 214
Mesophilic Anaerobic Digestion.....464
Mesophilic Anaerobic Digestion—Part II 546
Odor Control 176
"Package" Plants 369
Sewage Effluent Reclamation.....265
Sludge Digestion 38
Sludge Disposal 226
Solids Incineration Costs.....479
Total Oxidation Treatment.....276
Sewage Works:
Alexandria, Va. 165
Chicago, Ill.—To Try Zimmermann Process 219
Color Coding Plant.....262
Compressed Air Applications.....514
Coral Gables, Fla.....129
Dayton, Iowa 130
Electrical Supervisory Controls—Vancouver, Wash. 512
Enzymes—Aid at Genoa, Ill.....519
Flow Characteristics 325
Grand Rapids, Mich.....136
Grit Chamber Design.....271
How to Maintain Pipe Coefficient "C".440
Immediate Oxygen Demand, Digestor Liquor 374
Industrial Effluent Problem, Britain...428
Lagoon Disposal System.....424
Legal Problems 523
London County, England.....311
Mesophilic Anaerobic Digestion.....464
Mesophilic Anaerobic Digestion—Part II 546
"Package" Plants 369
Petersburg, Va. 460
Port Clinton, O.....128
Sewage Effluent Reclamation.....265
Windsor, England 132
Sewage Works Operation:
Air in Sewage Treatment..... 84
Alexandria, Va. 165
Biosorption—Activated Sludge 23
Books, 100 Best.....160
Digestor Operation, "CO_2 Alarm".....362
Immediate Oxygen Demand, Digestor Liquor 374
Louisville, Ky. 223
Luton, England 214
Mesophilic Anaerobic Digestion—Part II 546
Proper Sludge Digestion.....278
Solids Incineration Cost.....479
Sewage Works Practices:
Air in Sewage Treatment Plants..... 84
Biosorption—Activated Sludge 23
Butterfly Valves, How to Select.....413
Developments, Trends and Problems, 1957 49
Digestor Operation, "CO_2 Alarm".....362
Membrane Filter Procedure.....385
Sludge Digestion 38
Frothing Control, Act. Sludge.....172
Handling Dried or Incinerated Solids...479
Lagoon Disposal System.....424
Luton, England 214
Mesophilic Anaerobic Digestion.....464
Odor Control 176
"Package" Plants 369
Proper Sludge Digestion.....278
Sewage Flow, Parshall Flume.....366
Sludge Disposal 226
Total Oxidation Treatment.....276
Sewers:
Cleaning, Outside Forces.....000
Los Angeles, Calif.—Repair.....477
Pipe Jointing Material.....128
St. Joseph, Mo.—Maintenance.....474
Short Courses:
Bio-oxidation—Manhattan Col. 178
Corrosion Control 178
Seminar on Oxygen in Streams.....505
U. of Colorado—Water and Sewage....277
Sludge:
"CO_2 Alarm", in Operation.....362
Enzymes Correct Digestor Troubles....519
Handling Dried or Industrial Solids...479
Mesophilic Anaerobic Digestion—Part I 464
Mesophilic Anaerobic Digestion—Part II 546
Proper Digestion 278
Sewage Solids Incineration Costs.....479
Sludge Disposal 226
Sludge Digestion:
"CO_2 Alarm", in Operation.....362
Enzymes Correct Digestor Troubles....519
Mesophilic Anaerobic Digestion—Part I 464
Mesophilic Anaerobic Digestion—Part II 546
Proper 278
Sludge Digestion 38
Solar Distillation of Sea Water.....Oct. 106A

T

Table, Useful .....Aug. 96A
Tastes and Odors:
Causes in Drinking Water.....243

V

Valves:
Butterfly, Rubber-seated—Part I.....413
Remote Control and Telemetering System 506
Simplicity in Control Systems.....538
Water Hammer, Shock Pressure.....361

W

Water:
Alkalinity Measurements 509
Caesarea, Israel—Supply 304
Concentration of Impurities.....504
Consumption 199
Development of Supply Sources.....110
Fluoridation, Applied 348
Future Demands—(Speech Excerpts)..511
La. Oil Operators Stop Pollution.....156
Law—Liability to Prop. Owners—Fire.191
Law, Use in East..... 96
Membrane Filter Procedure.....385
No Natl. Ground Water Problem.....123
Photometric Determination of Color and Turbidity 492
Pollution Abatement, Mohawk R.....156
Properties, Chemical 165
Properties, Colloidal 167
Pollution, Hearing Called on 1956 Act.138
Recharge of Ground Water, Peoria, Ill..488
Reservoirs, Forced Circulation.....221
Tastes and Odors, Causes.....243
Sewage Effluent Reclamation for.....265
Softening, Municipal Supplies.....327
Softening, Part I.....397
Solubility of Oxygen in.....478
Water Resources Research Agency, Oklahoma U. .....Feb. 92A

Watershed Protection, Reservoir Mgt. and Pollution Abatement.....503
Water Softening—Part 2—Lime-Soda..496
Water Supply:
Alkalinity Measurements 509
Cassares, Israel 304
Caracas, Venezuela 207
Clarifier, Contact 99
Clarifier, Contact—Discussion 103
Cumberland, Md.—Line 159
Development of Sources.....110
Developments in 1956..... 1
Engineered Expansion Program, Atlanta, Ga.—Water Supply..... 62
Expansion, East St. Louis, Ill.....390
For Penna. Communities, Proposed....458
Magnetic Flow Meter.....380
Magnetic Flow Meter, Medford, Mass..382
Nashville, Tenn.—Floating Pump House 561
N. J. Reservoirs Drop.....503
No Natl. Ground Water Problem.....122
Operation and Maintenance of Water Distribution Systems 68
Paper Mill, Johnsonburgh, Pa.....120
Photometric Determination of Color and Turbidity 492
Plant Supply, Lagoon Rain Water.....491
Plastic Pipe for Water Service.....452
Pollution Control—in Fed. Budget....131
Pumping Sta.—Sullivan, Mo.....162
Progress in 1956..... 1
Recharge of Ground Water, Peoria, Ill..488
Remote Control and Telemetering System 506
Report on Needs.....Aug. 98A
Reservoirs, Forced Circulation.....231
So. Calif. .....Aug. 100A
Softening, Part 1.....397
Submersible Pump Applications.....431
Timber Reservoir Cover.....388
Watershed Protection, Reservoir Mgt. and Pollution Abatement.....503
Water Softening—Part 2—Lime-Soda 496
Water Treatment:
Activated Silica Preparation..... 20
Clarifier, Contact 99
Clarifier, Contact—Discussion 103
Compressed Air Applications.....514
Desalting Sea Water.....242
Fluoridation, Applied 348
Fluoridation, Chicago, Ill.....150
Novel Filtration Plant..... 89
Problems, Small Plants.....456
Recharge of Ground Water, Peoria, Ill..488
Simplicity in Control Systems.....536
Softening 327
Softening, Part 1.....397
Tank Maintenance 406
Walking-Beam Flocculators 279
Water Softening—Part 2—Lime-Soda..496
Water Works:
Automatic Control, Pumping Stations.540
Automation in .....Aug. 96A
Caracas, Venezuela 207
Color Coding Plant.....262
Compressed Air Applications.....514
Developments in 1956..... 1
El Centro, Calif.—New Plant.....293
Electrical Supervisory Controls—Vancouver, Wash. 512
Engineer and the Salesman.....249
Expanding and Improving Distribution Systems 256
Expansion, East St. Louis, Ill.....390
Filtration Plant 89
How to Maintain Pipe Coefficient "C".440
Law, Pipe Line Breaks.....377
Law, Use in East..... 96
Legal Problems 523
Magnetic Flow Meter, Medford, Mass..382
Management, Conservation and Public Relations 527
Meters, Advantageous 78
Operational Problems, in Small.....456
Operation and Maintenance of Distribution Systems 68
Plant Records 80
Program, Nationwide in Mexico.....489
Simplicity in Control Systems.....536
Steel Tanks, Inspec. and Painting.....153
Submersible Pump Applications.....431
Timber Reservoir Cover.....388
Unusual Tower, Scituate, Mass.....416
Walking-Beam Flocculators 279
Water Works Practices:
Books, 100 Best.....160
Butterfly Valves, How to Select.....412
Compressed Air Applications.....514
Corrosion—Part I 210
Corrosion—Part II 308
Corrosion—Part II, Continued.....356
Fluoridation, Applied 348
Fluoridation, Chicago, Ill.....150
Law, Pipe Line Breaks.....377
Magnetic Flow Meter.....380
Magnetic Flow Meter, Medford, Mass..382
Membrane Filter Procedure.....365
Photometric Determination of Color and Turbidity in Water.....492
Plant Maintenance, Operator's Responsibility 344
Problems, Small Plant Operation.....456
Properties of Water, Chemical.....105
Properties of Water, Colloidal.....157
Reservoirs, Forced Circulation.....231
Softening 327
Softening—Part 1 397
Tank Maintenance 406
Tastes and Odors, Causes.....243
Walking-Beam Flocculators 279
Water Softening—Part 2—Lime-Soda..496
Watkins, J. Stephen—new office.....373

Author Index—1957

A

Amsbary, Jr., Frank C. 527, 528
Arnold, G. E. 14
Aultman, William W. 327

B

Babcock, Russell H. 380
Barron, W. T., Miller, F. H., and 362
Beard, C. S. 536
Bishop, Raymond F. 205
Bloodgood, Don E. 38, 226
Burba, Foster S. 466
Burgard, J. R., and Wassall, D. E. 506
Burson, Harold 251

C

Cable, J. A. 254
Carlisle, O. B. 150
Carlson, Paul R., and Cornell, Perry 519
Carpenter, Neil A. 130
Casteel, Stephen C. 390
Chamberlain, W. H., Hatch, A. E., and 412
Clark, H. F.; Kabler, P. W., and Geldreich, E. E. 385
Cobb, Edwin B. 382
Corbalis, Jr., James J. 165
Cornell, P., Carlson, P. R., and 519

D

Davis, D. S. 478, 508
Davis, E. T. 368
Dawson, John P. 452
Dennis, Joseph M. 304
Dong, G.; Giusti, R. L., and Greenberg, A. E. 509

E

Evans, S. C. 214

F

Faber, Harry A. 160
Fair, Ernest W. 522
Finch, John 132, 325, 428
Finch, L. S., and Lyons, G. S. 179
Ford, Richard V. 114

G

Geldreich, E. E., Clark, H. F., Kabler, P. W., and 385
Gillespie, W., and Smith, C. W. 139
Giusti, R. L.; Greenberg, A. E.; Dong, G., and 509
Golden, Joseph F. 293
Goldstein, Alexander 448
Grant, Wallace 80, 344
Greer, H. G. 76
Graves, Walker H. 249
Greenberg, A. E.; Dong, G.; Giusti, R. L., and 509

H

Halvorson, H. O. 374
Hampton, Robert K. 470
Hartung, Herbert O. 89
Haskett, J. F.; Henry, J. L., and 348
Hatch, Jr., A. E., and Chamberlain, W. H. .. 412
Hathoway, Homer 388
Havenstein, H. W. 123
Hedgepeth, L. L., Adj. Prof., Rutgers U. ..... Aug. 96A
Henry, James L., and Haskett, James F. ... 348
Hoak, Richard D. 242
Hylton, J. L. 514

J

Jackson, J. O. 153
Jaffe, Theodore 84, 176, 369
Jensen, Emil C. 49
Juergens, Geo. W. 162

K

Kabler, P. W.; Geldreich, E. E.; Clark, H. F., and 385
Keefer, C. E. 128
Kenmir, R. C. 451
Kounts, R. Rupert 276
Kurtz, Harry W. 474

L

La Due, Wendell R. 503
Lamon, C. D. 406
Langworthy, V. W. 20
Langford, L. L. 464, 546
Larson, T. E.; Suter, Max, and Vogel, Orville 488
Learned, Albert P. 238
Levegue, R. J. 268
Linsley, S. E.; Mick, K. L., and 479
Livingston, Jr., L. E. 79, 198, 485
Lordley, H. E. 262
Lowe, Jr., Harry N. and Schmitt, Richard P. 99

M

McFee, W. E. 83, 136
McGauhey, P. H. 265
MacLeman, E. L. 271
Marrano-Coello, A. 267
Meeker, J. M. 491
Merryfield, Fred 1
Mick, Kerwin L., and Linsley, Scott E. 479
Miller, Frank H., and Barron, W. T. 362
Miller, Wallace T. 68
Monie, Wm. D., and Scales, H. B. 440
Murdoch, Jr., John H. 96, 191, 377, 523
Musgrove, Jr., T. T. 469
Myers, Jr., James W. 110

O

Orland, George 226

P

Palin, A. T. 492
Pardee, L. A., and Studley, E. G. 145
Phillips, Richard L. 120
Piper, W. E. 159
Porges, Ralph 199

R

Rawlinson, Joseph 211
Riddick, Thomas M. 231
Robb, Colin J. 462
Ruggles, Roy 213

S

Scales, H. B.; Monie, W. D., and 440
Schaphorst, W. F. 225
Schmidt, John P. 362
Schmitt, R. P.; Lowe, H. N., and 99
Schroeder, Marvin H. 512
Sherman, William T. 416
Smith, C. W.; Gillespie, W., and 139
Sparr, Anton E. 172
Spiker, LaRue 223
Stearns, Donald E. 254
Studley, E. G.; Pardee, L. A., and 146
Studley, E. G., and White, R. L. 477
Suter, Henry C. 459
Suter, Max, and Vogel, O.; Larson, T. E., and 488
Symons, George E. 105, 157, 210, 308, 356, 397, 496
Symons, James M. 319
Symons, James M., and Symons, George E. .. 42

T

Thomas, J. A. 242
Thomson, Pat 424
Tracy, John C. 163

U

Ulrich, A. H. 23

V

Vogel, O.; Larson, T. E.; Suter, Max, and .. 488

W

Weir, Paul 42
White, R. L.; Studley, E. G., and 477
Wilkins, Henry 19
Williams, Don B. 279
Williams, J. S. 540
Wootes, John L. 378